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ABSTRACT

The Utah Research Coordinating Unit (RCU) was established to conduct and supervise vocational research, develop research competency in the State, disseminate vocation research information, and provide help in preparing research proposals. The research needs of Utah were established by workshop and teacher briefings and interviews with district and state specialists. The RCU was involved in a total of 30 projects from July 1968 to August 1969 ranging from vocational education to rural youth to an evaluation of mobile electronics education. To aid in the development of state research competencies, the RCU encouraged graduate students and retired educational personnel to carry out needed research projects, and conducted conferences and workshops. In addition, the RCU helped persons prepare vocational education research proposals. Although the project did try to disseminate research information in vocational education, they were not able to find an efficient means of distributing the information. A description of 28 research projects is included. (BC)

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FINAL REPORT

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UTAH COORDINATING UNIT FOR RESEARCH IN VOCATIONAL AND TECHNICAL EDUCATION

September 1969
U.S. Department of
Health, Education, and Welfare

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UTAH COORDINATING UNIT FOR RESEARCH IN VOCATIONAL AND TECHNICAL EDUCATION

John F. Stephens, Director

Office of State Superintendent of Public Instruction

Salt Lake City, Utah 84111

September 1969

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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ADDENDUM

Introduction

Background

(Paragraph 1. The following is added in compliance with "Notification of Grant Award," June 30, 1969-August 31, 1969; "The report should cover the entire period of operation under the present Grant number through August 31, 1969.")

The second RCU Grant period (December 1, 1966 through June 30, 1968) operated under the Grant No. OEG-4-7-063046-1612; the third Grant period, reported herein, has operated under the same number. The final report of the second Grant period December 1, 1966 through June 30 1968) was completed and forwarded previously, and should therefore be referred to as a part of this final report. That report is also attached as a supplement at p. 50ff.

I. INTRODUCTION

Summary

Problem and Mission: The Utah Research Coordinating Unit (RCU) was established to be of service to all persons in the State interested in research efforts which could ultimately improve the vocational and technical education programs of the State. The RCU was particularly interested in: (a) Establishing research needs; (b) Conducting and supervising vocational research projects; (c) Developing research competencies among the personnel of the State; (d) Disseminating vocational and technical education research information; and (e) Providing assistance in preparing research proposals.

Method of Operation: The Utah RCU is a small organization with the equivalent of two and one half professional personnel headquartered in the Office of the State Superintendent of Public Instruction and in a branch office at the Utah State University. The small professional staff was supplemented with graduate students who were trained and then assigned specific projects to perform under the direction of the professional staff members. In addition assistance and direction was given to other graduate students, teachers, administrators and personnel from other disciplines in the performance of vocational and technical education research projects.

Results: The RCU was involved in one way or another in approximately 30 projects during this report period, and the results of those completed were forwarded as enclosures to interim reports to the USOE and, under separate cover, to ERIC. Projects completed since submission of the last interim report are enclosed herewith, or will soon be submitted.

Recommendations: It is recommended that the Utah Research Coordinating Unit be continued in the future and at gradually increasing funding levels.

Introduction

Problem

Stated most concisely, the basic problem was the need for immediate and ultimate expansion and improvement of vocational and technical education in the State of Utah.

Background

The original Research Coordinating Unit (RCU) contract expired 30 November 1966 and a second RCU Grant was in effect 1 December 1966 through 30 June 1968. This final report of activities covers the third grant period of 14 months, 1 July 1968 through 31 August 1969, for Project No. 6-3046, entitled, "Extension Grant for the Utah Research Coordinating Unit for Vocational Education".

The Utah RCU was headquartered throughout this period in the Office of the State Superintendent of Public Instruction at the University Club Building, 136 East South Temple, Salt Lake City, Utah. The Director was located within this office. A branch office of the RCU, under an Associate Director, was located at Utah State University, Logan, Utah. Intrastate coordination of research activities in Utah was assisted by means of frequent contacts between the RCU staff members and State specialists, local school district personnel interested in research, and with representatives of the institutions of higher education throughout the State.

Review of Related Research

A review of related research was generally conducted in conjunction with each project undertaken or sponsored by the Utah RCU and was included in the final quarterly interim reports. It is not, therefore, appropriate to resubmit each separate "Review of Literature" with this report of the RCU.

Mission

The Utah RCU was established to be of service to all persons in the State who had concern and interest in research efforts which could ultimately improve the vocational and technical education programs and opportunities for youth at the high school as well as the post-high school level, and for those adults who are in need of retraining to meet the demands of a fast changing world-of-work.

The missions of the Utah RCU, listed below, were selected as the areas most in need of study and systematic scientific investigation to provide answers to the many problems and questions faced in the solution to the overall problem, the improvement of vocational and technical education programs in the State of Utah.

The missions of the RCU were:

a. The establishment of research needs;
b. The supervision and conduct of vocational research projects;
c. The development of research competencies among the personnel of the State;
d. The dissemination of vocational education research information;
e. The provision of assistance in preparing vocational education research proposals.

Method

Organization

As mentioned earlier, the Utah RCU was headquartered in Salt Lake City, Utah, in the Office of the State Superintendent of Public Instruction, with a branch office and Associate Director at Utah State University. The Director reported to the Administrator of the Research and Innovation Division in the State Office. Close liaison and daily contact was maintained by the Director with the Administrator for Vocational and Technical Education and with the State Vocational Specialists.

The Utah RCU was manned mostly by Research Assistants recruited from among the graduate students of the Utah State University, and the University of Utah. The Director and the Associate Director trained these graduate assistants in the techniques of educational research, assigned research tasks to them, assisted in planning projects, monitored progress, and consulted in preparation of final reports. As these assistants gained experience they were able more and more to operate almost independently. In such a fashion, a maximum amount of research was undertaken with a minimum commitment of funds, and full time staff were freed to work with local district personnel and assist them in planning and implementing programs. This method was referred to as the team approach to research; the graduate assistant served as the Principal Investigator, the RCU Director or Associate Director served as the Project Officer, and subject matter or single discipline specialists throughout the State served as consultants.

Establishment of Research Needs

Several techniques were employed to establish the vocational and technical education research needs in the State, and all of the methods were focused at the needs of the practitioner. The solution of real and immediate problems was the over-riding factor in the establishment of research needs and of priorities within the needs.

Research needs were identified at several levels within the educational hierarchy in the State:

Secondary Teacher Level: In workshops and briefings teachers were encouraged to submit descriptions of problems which they faced in their own environs which were in need of study and solution. Also, meetings were held with individual teachers to discuss particular problems in need of research. Many suggestions were received and some resulted in research projects which culminated in recommended solutions. An example of such a project is "Science in the Home Economics Curriculum."

District Specialist and Administration Level: Under circumstances similar to those mentioned above, district administrators, vocational directors, and discipline specialists were also encouraged to contribute to the research efforts of the RCU by indicating areas of deficiency or by proposing answers to problems. Meetings with Vocational Directors were scheduled to discuss research needs and the assistance required to meet these needs. Projects instigated on this level include the "Central Region Project," and the "Feasibility Study for Establishment of an Ogden Area Vocational School."

Post-Secondary Teacher and Administration Level: By maintaining close liaison with the presidents of the technical colleges, through dissemination of research literature, and as a result of encountering problems in student placement and teaching, teachers and administrators in post-secondary institutions suggested a number of problem areas in need of research and remedy. In some cases the research was done by the instigator; in others it was done by the RCU or someone appointed by it. Examples are: "Qualitative Requirements for Heavy Equipment Operators," "Chemical Process Operator Survey," and "Buildings and Grounds Management Course Survey."

State Specialist Level: Since the State Specialists were very aware of many of the problems in their own areas of specialization, they found in the RCU a way to approach solutions of those problems; the RCU investigated, or provided for investigation of, many of these problems. Also, daily contact with the State Specialists in the office and at schools often led to discussion sessions, planning meetings, and the design of projects. Examples of investigations prompted by the State Specialists are the "Eye Safety Study," and "Evaluation of Special Needs Summer Program."

RCU Recommended Projects: Certain needs for research were also identified by RCU personnel as a result of conversations with other states and a knowledge of local conditions. In addition, one research project frequently revealed the need for another. Problem areas thus identified were always discussed with the Vocational Coordinators, Specialists, and/or Directors before being formally classified as a vocational area in need of research, and research projects were cleared with the State Administrator for Vocational Education before being undertaken.

The method used to study identified problems was: (1) discuss them with the person or persons who brought them to the attention of the RCU to further deliniate and define them, (2) assign a principal investigator from among the graduate students or some other interested and qualified person, (3) appoint an advisory committee where appropriate, (4) begin detailed planning and initiation of the study, (5) complete the study and disseminate the results to the originator and others, and (6) assist in pilot programs to demonstrate the feasibility of the proposed solution. This method of operation helped to insure that the research would fill a definite need in the State and that the results would be used.

The RCU also sought graduate students willing to do their theses or dissertations in areas of interest to the Vocational Division of the Office of the State Superintendent. Several students accepted such subjects, and in these cases limited financial support was provided to help defray the expenses involved. One such project was the "Site Selection Study." In addition, recently retired school teachers and administrators were encouraged to undertake vocational education research programs. "Chemical Process Operator Survey" is an example of a project initiated in this manner.

Supervision and Conduct of Research

The RCU had, under its immediate auspices, the conduct of several research projects carried out by the graduate research assistants regularly hired on a half time basis in both offices of the RCU, besides larger, more comprehensive projects requiring full time supervision. In both cases, the Director or Associate Director acted as the immediate supervisor, lending direction and assistance as required or requested, and occasionally the more experienced of the graduate assistants also acted as supervisors of projects.

This supervision was exercised constantly throughout the conduct of projects. It began at the earliest planning states, and carried through during the proposal preparation, at significant points during the conduct of the project, during evaluation of data, in preparation of the final report, and finally, in submitting the report to the U.S. Office of Education for review.

Several methods of supervision were utilized at all of these points, the most significant and encompassing of which was the Project Evaluation and Review Technique (PERT). With the constant use of PERT in planning and carrying out research, supervision could be exercised at critical points, for spot checking, debriefings, visits to projects, and over-all review of the status of the project.

RCU professional personnel attended national and regional conferences on research, and the Director was a member of key research committees in the State. As a result of these memberships and meetings, the Director became acquainted with the research in progress and planned, and could then exercise a more effective supervision during both the planning and the conduct of vocational education projects, and duplication was minimized. Also, the Director was able to inform inquiring agencies about RCU coordinated projects, and these agencies could then also avoid duplication.

Development of Research Competencies

The RCU attempted to develop research competencies among the personnel of the State through such activities as (1) encouragement of graduate students to do

theses and dissertations in vocational education subjects; (2) recruitment of retired educational personnel to carry out needed research projects; (3) regional workshops and conferences to acquaint potential researchers with needs and methods in vocational education research; and (4) dissemination of completed research to interested people.

The RCU sponsored or contributed to several workshops or conferences in the preceding 14 months intended to encourage educational personnel to actively participate in finding answers to their own problems, or to find adequate means of implementing research findings. These workshops and conferences resulted in an increased number of educational personnel actively engaging in, developing, or implementing answers to a variety of problems in vocational education.

In an effort to dispel some of the aura of mystery that surrounds the idea of educational research, and thus encourage individuals to at least attempt to learn more about it, the RCU was in the habit of briefing the results of on-going and completed research projects to educational personnel throughout the State. In this way also, people interested and competent in research were identified as they inquired for further information or brought additional problems to the attention of the RCU.

Dissemination of Research Information

Although the dissemination of vocational education research information was attempted or accomplished by several methods, the RCU was unable to find adequate means of getting <u>all</u> the appropriate information to <u>all</u> the right people at the most appropriate <u>time</u> in order to maximize the possibility that they would make use of the work already done by others. During the first grant period, an attempt was made to blanket the entire State with information in the form of abstracts sent to local and State directors of research, vocational education, and other evidently appropriate individuals; this means of dissemination was found to be impractical and inadequate however, and different ways were attempted.

Also used as a means of dissemination of the results of research accomplished were presentations to teachers and students in graduate classes at the universities, and in workshops and conferences for in-service training and/or recertification. By this means it was expected that information would be related to those most concerned with progress in education and who could best utilize the information. It was also hoped that these people would be stimulated to attempt projects of their own to solve problems they encountered.

These methods, however, were found to be too cumbersome, and due to insufficient staff, difficult to maintain and they seemed to be generally simply ineffective. The best means of dissemination of information found was meetings of the staff and various committees which the RCU Director regularly attended. These always included Instructional Staff and Research Committee meetings. In these meetings the Director was able to acquaint the staff of the State Superintendent's office with the research accomplished and in progress, and the staff in turn often suggested to the Director research that was needed; the result was often a planning session and frequently new programs were developed or results were utilized. In addition, informal spontaneous contacts with local and State personnel have been found to be an effective, although not comprehensive,

means of dissemination of information and stimulation of research effort. Finally, included with each project report submitted to the U.S. Office of Education is an abstract of the research and findings for the Educational Research Information Center (ERIC). The Office of the State Superintendent of Public Instruction also maintained a partial file of ERIC materials, and a "reader-printer" permitted visiting and resident personnel to retrieve, read, and reproduce research articles of individual interest. This use of the ERIC system is perhaps one of the most promising ways by which research information can be disseminated from this office.

The most common means of national dissemination which the RCU utilized, which was general and informal, was the liaison maintained with other RUC's in correspondence, and attendance by the Director at National conferences and meetings of research personnel. Intra- and inter-state communication was also carried on in correspondence with such agencies as departments of employment security, universities and colleges, and boards of education. In this communication, the RCU attempted to determine the research in progress, completed, and planned by these agencies, and aimed at acquainting them with the work of the Utah RCU.

Assistance in Preparing Research Proposals

The RCU made it a practice to be available for the preparation of vocational education research proposals.

Liaison was maintained with agencies in the State in which there were individuals competent in research, such as universities, technical colleges, and the vocational education and curriculum specialists of the districts, and within the Office of the State Superintendent of Public Instruction. As research needs were established, as described above, these agencies were contacted and their interest in pursuing an answer to the stated problem was determined. Often one of their personnel would be interested in the question, and from this contact a principal investigator was appointed.

In cooperation with this principal investigator, the draft of a proposal to secure State or Federal funding would be begun, and arrangements for consultants made as this need arose. The RCU either wrote, or assisted in writing of the proposals to conform with State and Federal specifications, and the proposal would then be submitted to the State Research Committee. (No proposals were submitted to the U.S. Office of Education during this grant period.)

In connection with this process of preparing proposals, the RCU arranged for consultant assistance, graduate student assistance, and administrative support for the conduct of research and preparation of interim and final reports. Also, the RCU was ready to provide supervision and assistance in conduct of the research after it had been funded and begun.

The RCU utilized this activity of supervision and assistance to look for indicators of additional needed research in the same or related fields to meet the training needs of youth and adults.

II. FINDINGS AND ANALYSIS

Results

Projects

Seventeen projects undertaken during the grant period reported herein have been completed. Ten research programs which were planned or reviewed by the RCU, and are supported by RCU-secured funds with RCU-employed principal investigators are in progress or nearing completion. The projects are listed and/or briefly described below and in the PERT section of the Appendix. Final reports of most of those projects which have been completed have already been submitted with the quarterly interim reports: final reports of those completed since the last interim report are included here, or will be forwarded in the near future. In addition to the projects in progress and/or completed, several other programs are in various stages of planning and will begin within the next few months.

Under the auspices of the RCU during the period 1 July 1968 to 31 August 1969, the following research projects were carried out with the status or results as indicated.

1. Vocational Education for Rural Youth (Articulated Occupational Program). Continuing; see PERT, p.22, Appendix.

"PEDAPOP" - A program for ninth graders designed to improve self-concept, acquaint the students with their skills and aptitudes, stress the importance of interpersonal relations in the world-of-work, and teach the elements of logical decision-making. Two years of trial have been completed, and an initial evaluation report has already been submitted.

"American Industry" - A program for tenth graders based on the program by the same name developed at Stout State University and designed to teach the concepts or functional components of profit motivated industry. One year of trial has been completed, the program has been revised to make it more compatible with the local environment, and the program will be evaluated at the end of the second year.

"Over-the-Shoulder" - This phase of the project is patterned after a program developed by Paola, Kansas School District. The focus of the program revolves around four two-week blocks of exploration of occupations of the 11th grade youth's choice. In each school quarter the student will have the opportunity to study attitudes, skills, and the education needed for a particular job by observing people working in that job. Each observation period has the student filling out application forms, as if he were actually applying for the job. The student will spend one to two hours each day for a week in local industry actually observing the job in which he is interested. From these observations it is hoped that the student will be able to make a more realistic choice of educational and occupational goals. The first trial year will occur during the 1969-1970 school year.

2. Follow-up Study of Utah's Vocational Graduates. Continuing; see PERT, p.23, Appendix.

This study is intended to assist in increasing the ability of persons responsible for vocational education to evaluate and improve programs of training by following the progress of students in the world-of-work after they have left school.

3. Office Simulation Project. (Mobile Office Education).

The first year trial and evaluation has been completed; see PERT, p. 24, Appendix. The evaluation report is enclosed. The program will be repeated during the 1969-1970 school year and then evaluated again.

Since very limited cooperative work-study opportunities are available in most rural areas, a mobile trailer unit was outfitted with sophisticated office equipment manned by an itinerant teacher, and provided with a simulation curriculum, and it traveled among four rural high schools. Through simulation, rural office occupations students have become acquainted with some of the problems and harrassments encountered in the world-of-work, and should now be better able to compete with students who came from urban areas.

4. Science in the Home Economics Curriculum. Completed; see PERT, p.25, Appendix. The report of this project has already been submitted.

The purpose of this study was to examine how home economics teachers use chemistry in the homemaking curriculum at the secondary level. More specifically, this study hoped to determine:

1) The extent to which the fifty states required science in the home economics education curriculum.
2) The extent to which science was used in the classroom situation.
3) The extent to which classroom teachers who have not had science were handicapped in their teaching.
4) Recommendations for change in the curriculum of home economics education majors to eliminate any unnecessary science instruction.

Conclusions and recommendations indicated that more liberal and basic science options should be provided the home economics education major, as requirements at present cover material that is not generally applicable to secondary home economics teaching.

5. Utah VIEW Project. Completed; see PERT, p.26, Appendix. The report of this project has already been submitted.

This project was patterned after a similar one conducted in San Diego County, California School District. In Utah it involved the use of microfilmed occupational information in needlesort aperture cards developed by 3M company and using their reader-printer

equipment. The test was conducted at the high school level, and involved only occupations which did not require a baccalaureate for entry.

6. Project MACE (Mobile Assisted Career Exploration). Continuing; see PERT, p.27, Appendix.

This project developed out of Project VIEW and was based on the idea that modern equipment such as microfilm reader-printers would be more useful as part of a vocational counseling "package" to be mobile-mounted and used by a trained, enthusiastic, intinerant counselor.

Utah has experienced difficulty in providing adequate vocational guidance for its rural student population. Location and limited budgets, plus various other factors impinging on rural school districts have resulted in a dearth of trained counselors, available career information materials, and information about students. This study will investigate whether a mobile guidance unit can provide an efficient system for increasing the vocational maturity of ninth grade students in the rural school setting.

7. Qualitative Requirements for Heavy Equipment Operators. Completed; see PERT, p.28, Appendix. The report of this project has already been submitted.

This project was undertaken to determine if the job market warranted the initiation of a heavy equipment operator's course at the post-secondary level. It was determined that such a course would be prohibitively expensive, and the demand for workers is limited.

8. Preparation of a Booklet and Visual Aids on Vocational and Technical Education in Utah. Completed; see PERT, p.29, Appendix. The report of this project has already been submitted.

It was the purpose of this project to attractively present the importance and value of vocational and technical education in an illustrated booklet, and through visual aids that could be used in an oral presentation on the subject. The booklet and the visual aids will be useful for guidance counselors, teachers, students, parents, and State Legislators as it presents the value of vocational education for the expanding economy of Utah and explores the needs for additional development of this important portion of the educational complex.

9. Vocational and Technical Education Scholarships Procurement and Utilization. Completed; see PERT, p.30, Appendix. The report of this project has already been submitted.

Based on an earlier, smaller study, this project investigated the possibility of establishing citizens' committees in six Utah

districts, which would, in a "March-of-Dimes" fashion, stimulate support of, and contributions for, a program creating vocational and technical education scholarships for local area youth. A secondary aim of the program was to improve the public image of vocational education while making the program self-sustaining for future maintenance of the scholarships. The program operated two years and the first year's evaluation was previously submitted.

10. Typing for the Blind. Complete; no PERT is available for this project. A proposal for Federal funding to train teachers, in lieu of a report, has already been submitted to the USOE.

This project was a feasibility study undertaken to investigate the use of typing to teach reading to the blind. The study also pointed out areas where the teaching materials available were inadequate or obsolete.

11. Development of a Model Representative of the Utah State Public School System. Suspended, pending decisions by the State Superintendent of Public Instruction. See PERT, p.31, Appendix.

A task force was organized from personnel in the Office of the State Superintendent of Public Instruction to develop a model of the Utah State public education system. The model was to serve as a planning tool for the State Superintendent and his staff and hopefully would provide information for State legislators. It will be designed as an input/output device where a change in input is observable as a perturbation in an output in accord with certain policies and priorities programmed into the routines.

12. Hill Air Force Base Study. Complete; see PERT, p.32, Appendix. The report of this project has already been submitted.

The Office of the State Superintendent of Public Instruction in 1968 scheduled special vocational classes to train personnel to fill job vacancies that existed at Hill Air Force Base. The training was conducted and the personnel placed on the job. The RCU evaluated the instruction conducted in terms of the success of the former students.

13. Eye Safety Study. Completed; see PERT, p.33, Appendix. The complete report of this project is being prepared and will be submitted in the near future. A summary report has been prepared, distributed, and is herewith forwarded.

The school eye safety study was designed to measure the degree of compliance in the secondary schools of Utah with the Utah School Eye Safety Act of 1965 and to determine what action might be taken to increase compliance if any such action proved necessary.

14. Graphic Communications (Printing) Industry Survey. Completed; see PERT, p.34, Appendix. The report of this project has already been submitted.

This project was conducted to determine the need to establish a vocational-technical course in printing occupations at the Utah Technical College at Provo, and/or to change instructional programs in classes currently being taught in other schools in Utah.

15. Evaluation of Clearfield Job Corps--Utah High School Commuter Program. Completed; see PERT, p.35, Appendix. The report of this project is being prepared and will be submitted in the near future.

The objective of this project was to evaluate the effectiveness of a commuter program for high school dropouts and potential dropouts operated by the Clearfield Job Corps Center (CJCC) in conjunction with Ogden and Box Elder school districts, and the Utah State Board for Vocational Education. The students spent half their time in vocational training of their choice, and half in basic education instruction. On-the-job training in community industries was also provided for the trainees. Job placement was arranged by the CJCC's placement service at the completion of the training program. The evaluation will measure the program's effectiveness as compared to a control group in terms of success in retaining the trainees in the program until its completion, and of the ability of the graduates of the program to obtain and retain a job upon its completion.

16. Evaluation of Special Needs Summer Program. Completed; see PERT, p.36, Appendix. The final report of this project is enclosed.

This project evaluated the effectiveness of a special summer program for high school dropouts held during the summer of 1968 in several school districts in Utah. The programs grew out of a course in special problems for selected vocational education teachers offered at the University of Utah during the spring quarter, 1968. Each teacher prepared an outline of identified needs of his students who had dropped out of school during the current school year. These outlines were then used by the teachers as a guide in operating summer programs in their schools; each program, being based on a different outline, was different. The objectives of the overall program were to encourage the dropout to return to school and to remain in school, and/or to help him obtain employment stability. The experimental group was compared with a matched control group on the following factors: rate of return to school, continuation in school, and employment stability.

17. Site Selection Study. Completed; see PERT, p.37, Appendix. The final report of this project is enclosed.

This study attempted to: (1) List the factors important in Area Vocational School location; (2) List the factors important in Area Vocational Center location; (3) Determine how to measure these factors; and (4) Weight and combine factors to produce a site selection model.

18. Adult Vocational Education Evaluation. Continuing; see PERT, p.38, Appendix. This project was temporarily suspended pending the location of a principal investigator. It is now being resumed.

The objective of this program was to assess the impact of the recent adult vocational education courses. "Impact" was defined in terms of ability to obtain work and/or improved job performance.

19. Chemical Process Operator Survey. Completed; see PERT, p.39, Appendix. The final report of this project is being prepared and will be submitted in the near future.

This survey was conducted to determine whether the Utah technical colleges should offer a course of study to train Chemical Process Operators and/or Chemical Technicians to meet expected new demands for skilled labor. The specific objectives of the survey included: (1) To define the term "Chemical Process Operator"; (2) To list industries in which such an occupation is likely to exist, and briefly define the duties of the position; (3) To list schools in which courses for Chemical Process Operators/Technicians are offered, and briefly describe the course content; and (4) To determine present and future job potential in Utah for Chemical Process Operators/Technicians.

20. State Plan. Completed; see PERT, p.40, Appendix. RCU involvement in preparation of the State Plan is complete, and it was submitted by the Vocational Division of the Office of the State Superintendent of Public Instruction.

The RCU participated in the preparation of the State Vocational Plan by preparing the research portion of Section I, and the Research and Exemplary Program portions of Sections II and III.

21. Ogden Area Facilities Utilization Study. (formerly "Feasibility Study for Establishment of an Ogden Area Vocational School".) Completed; see PERT, p.41, Appendix. The final report of this project is enclosed.

The objective of this study was the determination of the extent to which the comprehensiveness of the vocational-technical education program of the Ogden area can be increased through more intensive and varied use of presently existing facilities. It was assumed that by first identifying the kinds of facilities available for use, appropriate programs for making maximum use of the facilities can be prepared.

22. Mobile Electronics Education Evaluation. Completed; no PERT is available for this project. The final report is being prepared, and will be submitted in the near future.

The objective of this project was to provide, through the use of a mobile electronics classroom, instruction for high school students

in electricity/electronics to permit these students to explore this field for a career and to teach them some of the basic fundamentals of the discipline. The objective of the evaluation of the project is to determine the impact of the MEE on students' knowledge of electronics.

23. Central Region Project. Continuing; see PERT, p.42, Appendix.

It is the objective of this project to assist six districts in the southern part of the State to improve selected areas of their educational program through regionalization. The areas selected by the Regional Board for initial focus are: guidance, art, music, and drama.

The RCU is assisting in preparation of behavioral objectives in the four areas of emphasis using the INSGROUP tiering technique (policy, program, curricular, and instructional objectives), and in the organization and funding of workshops to write the objectives. On-site evaluations will be made of the schools in the region by the principal investigator to evaluate their present programs against these objectives. Weak areas and gaps will be identified, constraints will be listed, and a more comprehensive curricular plan will be attempted in the subject areas.

24. Planning-Programming-Budgeting for Central Region Service Agency. Continuing; see PERT, p.43, Appendix.

This project is an outgrowth of the Central Region project mentioned above. It is the objective of this project to install a PPB system in selected pilot districts of the State and measure the effectiveness of it as a management tool. The initial objective is to prepare a proposal for submission to USOE or the State for funding support for the training necessary for on-site personnel in several pilot districts. The preparation of educational goals and measurable program objectives will lead to better data which the decision-maker can use to make cost effectiveness analyses in arriving at more efficient educational decisions.

25. Project RESPECT (Resources for Economic and Social Progress through Education and Cooperative Training). Continuing; a PERT for this project is not available.

It is the objective of this project to plan and conduct an experimental vocational program for the disadvantaged black community in Utah. If successful, the project will enlist, train, and place in jobs 50 to 60 Negroes who are not working now (and are considered disadvantaged), and have shown an inability to improve their lot.

The focus will be on providing training in fields desired by the individual disadvantaged black person and in placing him in a job which he considers worthy of his abilities. A principal investigator and two assistants ("coaches") have been employed to obtain applicants for the program, establish the training requirements, assist in training, and assist in job placement.

26. Study of Feasibility of Reprocessing Surplus Computer Tape to Permit Use with Utah School Video Tape Equipment. Continuing; see PERT, p.44, Appendix.

The objective of this project is to determine whether the much less expensive government surplus computer and telemetry tape can be used "as is" as an adequate substitute for the commercial video tape now being procured, or, if not, to recommend a lubrication procedure or other technique which would make the surplus tape compatible. Specifications will be prepared on the scope of work desired, advertised in periodicals, and an award will be made to the lowest bidder with the necessary expertise. The project will probably include 100 hours of run time to determine damage to school-type video tape equipment, and the development of a process to appropriately lubricate the surplus tape to minimize the chances of "gumming" or causing excessive abrasive wear on the video tape equipment.

27. Survey of Buildings and Grounds Management Courses at Utah Technical College at Provo. Continuing; see PERT, p.45, Appendix.

The objective of this project is to determine the need for courses in Buildings and Grounds Maintenance at the Utah Technical Colleges. The survey will include the determination of the number of appropriate jobs available now and in the near future from Utah State Employment Security, and interviews with businessmen and building superintendents in Utah to determine what types of tasks a person employed in building and grounds maintenance is expected to perform that requires previous formal training.

28. Evaluation of Mobile Office Education (MOE) Migrant Worker Program. Completed; no PERT is available. The report of this project is being prepared, and will be submitted in the near future.

The objective of this project is to determine the effectiveness of the use of the Mobile Office Education unit and simulation curriculum in teaching children of migrant workers business oriented math, English, and typing. The children were given pre- and post-tests, by a University of Utah graduate student, of their knowledge and skills. Due to certain ethnic eccentricities and the students' usually rather low achievement, much of the testing was in the form of classroom observations and rating of the students, as well as their demonstrated achievement in written tests.

Consulting and Other Activities

Approximately 1/4 to 1/3 of the RCU Director's time and 1/10 of the Research Associate's is spent in a consultative capacity. Assistance in various phases of planning, conducting or reporting projects carried on by others is considered by the RCU to be one of its major functions. Most contacts the RCU makes are for the purpose of planning, implementing, or reporting research. The following is a list of activities of this nature.

1. Feasibility Study of Curriculum Development Laboratory. Suspended; see PERT, p.46, Appendix.

The Research and Innovation Division, of which the RCU is a part, has been requested by the State Superintendent of Public Instruction to perform a feasibility study of the establishment of a Curriculum Development Laboratory (CDL) supported by the State school office. In order to quantify the cost effectiveness of CDL's functioning under different operational patterns, the physical and operational characteristics of each pattern will be described in detail. The RCU Director is serving on this task force.

2. SUCCESS. Continuing; no formal PERT is available.

Project SUCCESS is a three-year effort to improve vocational education by increasing the comprehensiveness of three large Utah high schools.

3. Sevier Measurable Objectives Program. Continuing; see PERT, p.47, Appendix.

The objective of this program is to prepare and utilize curricula in five vocational areas which are written in terms of measurable educational objectives in order to improve the classroom instruction, better prepare students for work after leaving school, and to improve articulation between echelons of schools. Closely coordinated with this primary objective is that of the development of mediated instructional packages, called MINIPACs, in the T&I area. These MINIPACs will facilitate individualized instruction and allow more time for the teacher to deal with individual students in the classroom while pursuing objectives outlined in the workshops.

4. National RCU Directors' Convention. Noted in Interim Report, April 1969.

5. Meetings, Conferences, etc.

RCU staff attended the following meetings and/or conferences:

a. Interstate Project Workshop, Denver, Colorado, February 1969.
b. American Vocational Association, Dallas, Texas, December 1968.
c. National conference on Policy on Vocational Education Research, Oklahoma City, Oklahoma, February 1969.
d. National workshop on Improving Vocational Education Evaluation, Fayetteville, Arkansas, August 1969.
e. National workshop on Establishment and Operation of Local Educational Information Center, Las Cruces, New Mexico, July 1969.

III. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The Utah RCU was funded and operated under its original contract from 1 June 1965 until 30 November 1966. Prior to this original contract period, vocational education research in Utah was negligible. During the initial grant period, the RCU concentrated on organizing and training, and establishing itself as a reliable and desirable feature in the educational system of the State. It was during this period that the RCU sought the recognition and confidence of the key vocational educators in the State without which the future efforts of the RCU would have been almost meaningless. Since the beginning of the second contract period and during this third contract period, the RCU has assumed an extremely useful role in the identification and solution of vocational and technical education problems in the State. The following conclusions itemize this role:

The Establishment of Research Needs

The Utah Research Coordinating Unit, actively supported by the State Superintendent of Public Instruction and the Administrator of Vocational and Technical Education, operated under the assumption that it was best for local research efforts to concentrate on problems that are of primary importance to the State and which would lead to the solution of problems important in achieving intermediate and long term objectives and goals. Consequently, the Utah RCU compiled and maintained a priority listing of areas in the vocational/technical fields in need of study; this list was periodically checked and updated through liaison with the State Vocational Specialists and the local district Vocational Directors and Superintendents. Such an approach led to a greater proportion of "solicited" research as opposed to "unsolicited," and hence to solutions of more immediate and central problems.

The Supervision and Conduct of Vocational Research Projects

The RCU considered this to be one of its most important missions. Many research projects were conducted directly by the staff of the RCU, while others, originated and conducted by non-RCU personnel, were RCU supervised from the planning stages through the submission of the final report. In this supervisory capacity, the RCU improved the coordination of research within the State, secured consultant service, extended cooperation among agencies, identified additional research needs, identified and developed competencies among the personnel of the State, assisted in or provided for dissemination of research results, and was instrumental in the implementation of the solutions found. Program Evaluation and Review Technique (PERT) was habitually used for the planning, conducting and monitoring of research programs.

The Development of Research Competencies Among the Personnel of the State

If more research is to be accomplished in the vocational and technical education area, then a broader base of available researchers must be established. A three-pronged attack of this problem was initiated: the development of an interest in accomplished educational researchers in the undertaking of the solution of a vocational problem; the training of additional researchers; and the use of agencies with research competencies in disciplines other than education. Although the number of researchers

available still remains small, some success was achieved through public relations programs and personal contact, and in soliciting experienced educational researchers to perform studies in the vocational/technical educational fields. These efforts resulted in the conduct of several research programs with funds available within the State and with RCU funds.

The orientation of potential researchers was accomplished primarily through in-service training workshops for the vocational and technical education teachers and administrators of the State. The annual week's workshop held in June at Utah State University for all the vocational and technical educators of the State provided the best opportunity for instruction in research techniques and terminology. Through these workshops more people became aware of the services of the RCU and of the value of research in critical vocational areas. Possibly the greatest advantage of this type of workshop was the arousing of a curiosity or interest in research.

The Dissemination of Vocational Education Research Information

Since its inception, the RCU has attempted to find an adequate means of dissemination of the information it acquired. As mentioned on pages 5 and 6, several means of dissemination have been tried, including the blanketing of the State with abstracts, presentations in workshops and conferences, and interaction with vocational educators and administrators. All of these methods resulted in acquainting some individuals with the work of the RCU and accomplishments in vocational education research. It appears, however, that the most effective dissemination is accomplished through personal contact with researchers and potential researchers, actual users of the results of research, and the use of pilot projects. The use of the ERIC system is evidently the most effective means of National dissemination and the RCU has attempted to acquaint personnel in the State with ERIC so it could be more widely used. A method which was found to be reasonably effective was the participation by the Director and Assistant Director in State and local workshops and conferences. As a result of this participation, teachers and administrators began to show increased interest in the RCU and its research efforts.

The Provision of Assistance in Preparing Vocational Education Research Proposals

Many of the persons in the State who face problems that are in need of research or who are interested in conducting a research program are not knowledgeable of the various formats required by State and Federal agencies and are sometimes inexperienced in expressing their ideas in the normal language of research. The RCU made it a point to remain current in the format required by the various agencies so as to be able to advise potential researchers. In addition, the services of the RCU were available and often used in "brainstorming" sessions to help define and transcribe the statement of the problem and the description of the research design to adequately study the problem. It became more widely recognized within the State that early involvement of the RCU would often save the researcher considerable time and effort in the long run.

Occasionally, the RCU, rather than assuming the advisor role in proposal preparation, assumed the leadership role. This was most often the case when several agencies were involved in the study of a vocational problem designated by the State. The design of the research programs conducted by the RCU staff members was always prepared by the RCU with consultation and advice from the person or persons who delineated the problem, as well as experts in the subject matter field.

Recommendations

In light of the conclusions described above, and the research progress reported in the foregoing sections, it is recommended that:

1. The missions of the RCU, as stated above, continue to be considered of primary importance, and that effort toward achievement of these missions be given high priority;

2. The RCU continue to work in close cooperation with the Vocational Division of the Office of the State Superintendent of Public Instruction to maximize usability and adaptability of research for the benefit of the State; and

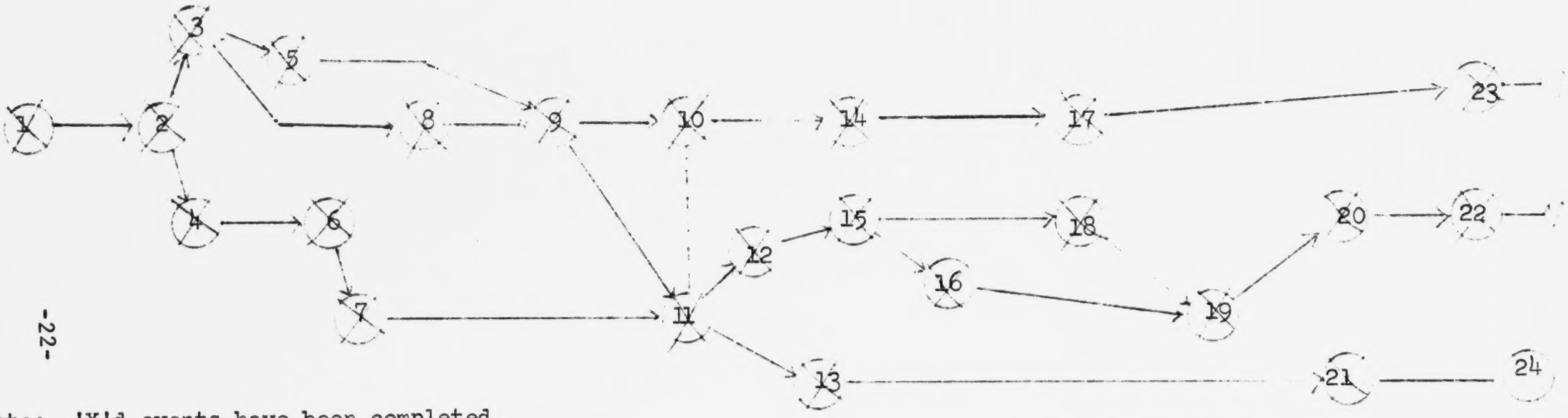
3. As the RCU operations of the past have demonstrated that an increased effort is warranted in the future, funding levels be increased to permit better accomplishment of the missions of the RCU.

IV. APPENDIX

PERT NETWORK

ARTICULATED OCCUPATIONAL PROGRAM

MILLARD DISTRICT



Note: 'X'd events have been completed

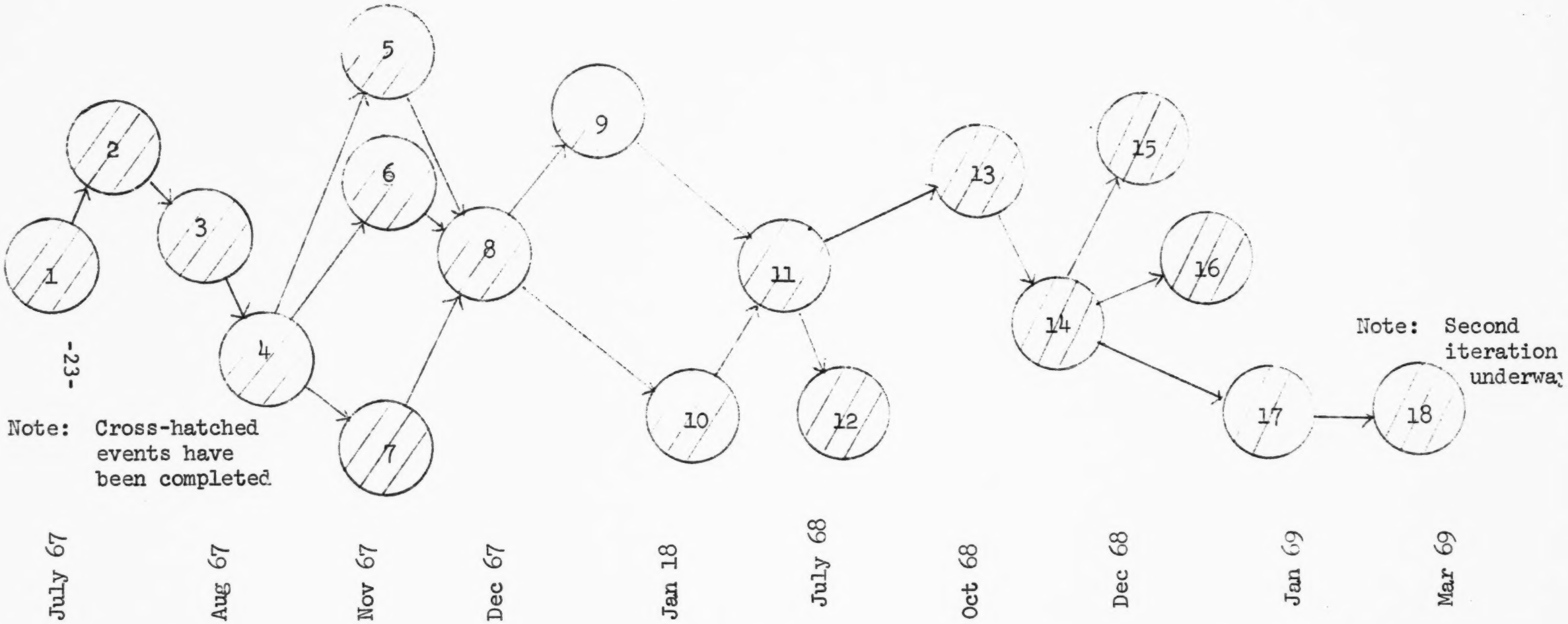
Mar 67 | July 67 | Oct 67 | June 68 | July 68 | Aug 68 | Sept 68 | Oct 68 | June 69 | July 69 | Aug 69 | Sept 69

1. Begin project
2. Complete workshop
3. Publish 9th grade curriculum
4. Publish outline for 4 yr program
5. Submit proposal to USOE for evaluation
6. Begin planning 10th grade course
7. Adopt philosophy
8. Complete one year's trail in Millard school district schools
9. Complete evaluation
10. Revise 9th grade course
11. Complete draft of 10th grade course
12. Complete in-service training of teachers
13. Begin planning 11th grade course
14. Begin repeat of 9th grade course
15. Begin trial of 10th grade course
16. Submit proposal for evaluation of 9th grade course
17. Complete 2nd year's trial
18. Complete 1st year's trial
19. Complete evaluation of 10th grade course (Spring 1970)
20. Revise 10th grade course
21. Complete planning 11th grade course
22. Begin repeat of 10th grade course
23. Begin to integrate into other schools
24. Begin implementation of 11th grade course

PERT NETWORK

FOLLOW-UP STUDY OF UTAH'S

VOCATIONAL GRADUATES



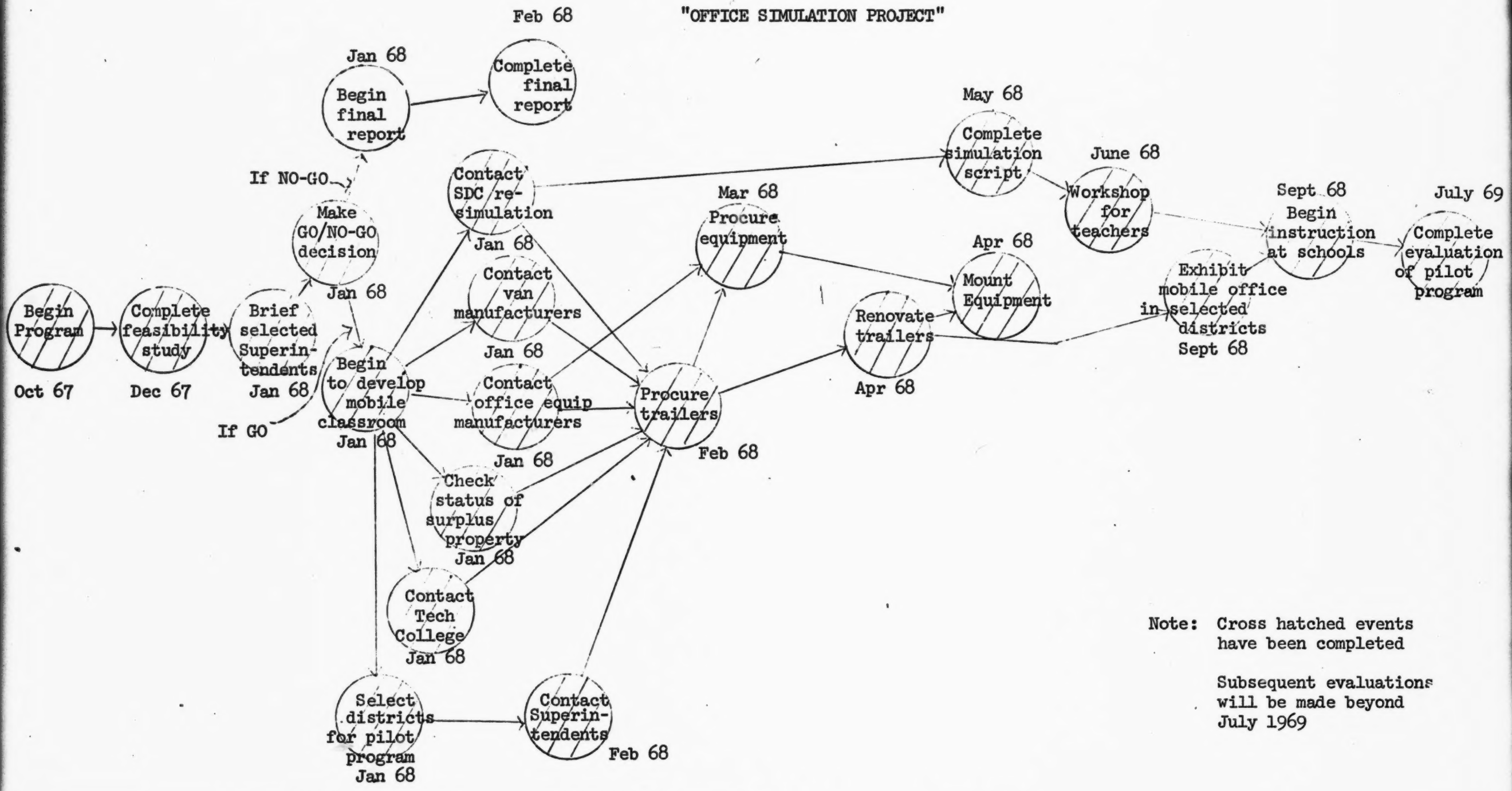
Note: Cross-hatched events have been completed

Note: Second iteration underway

1. Begin program
2. Prepare preliminary design
3. Complete staff coordination
4. Secure data processing committee approval
5. Discuss with post-secondary school presidents
6. Discuss with districts superintendents
7. Draft formats
8. Descriptive literature to each school
9. Distribute exit interview forms
10. Complete computer program
11. Begin use of exit interview forms
12. Mail printouts to schools
13. Mail follow-up questionnaire
14. 2nd and 3rd iterations to non-responders
15. Submit federal report
16. Mail printouts to schools
17. Evaluate data for State
18. Publish cost-effectiveness study

PERT NETWORK

"OFFICE SIMULATION PROJECT"



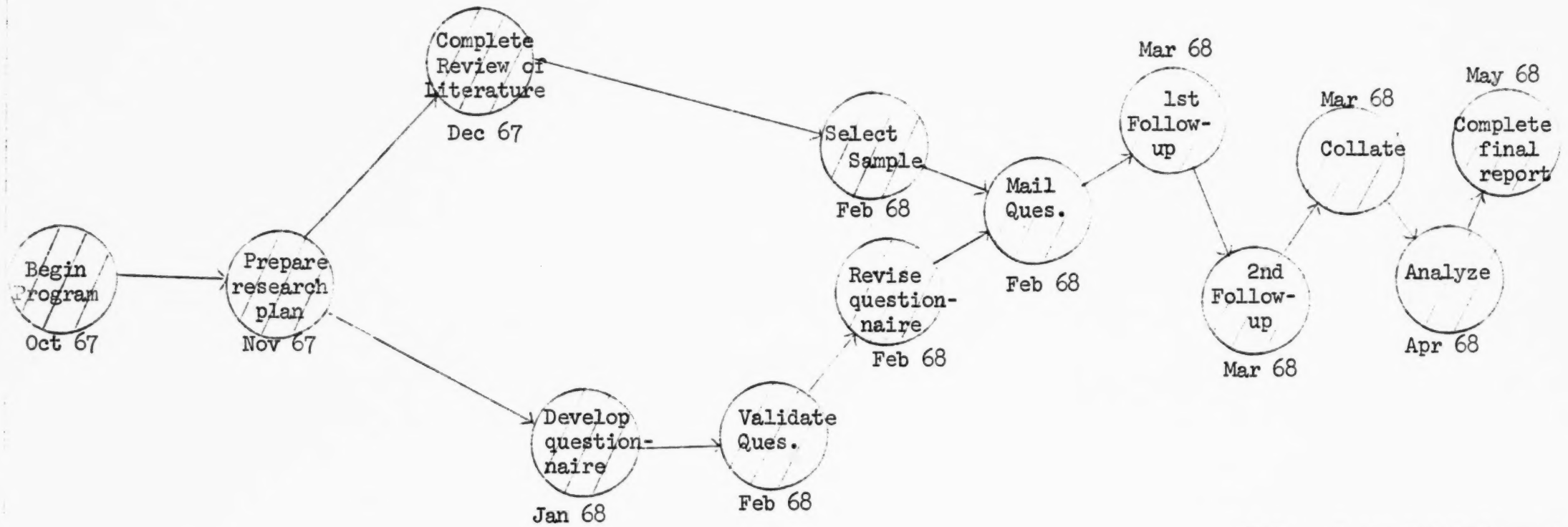
Note: Cross hatched events have been completed

Subsequent evaluations will be made beyond July 1969

PERT NETWORK

SCIENCE IN THE HOME ECONOMICS EDUCATION

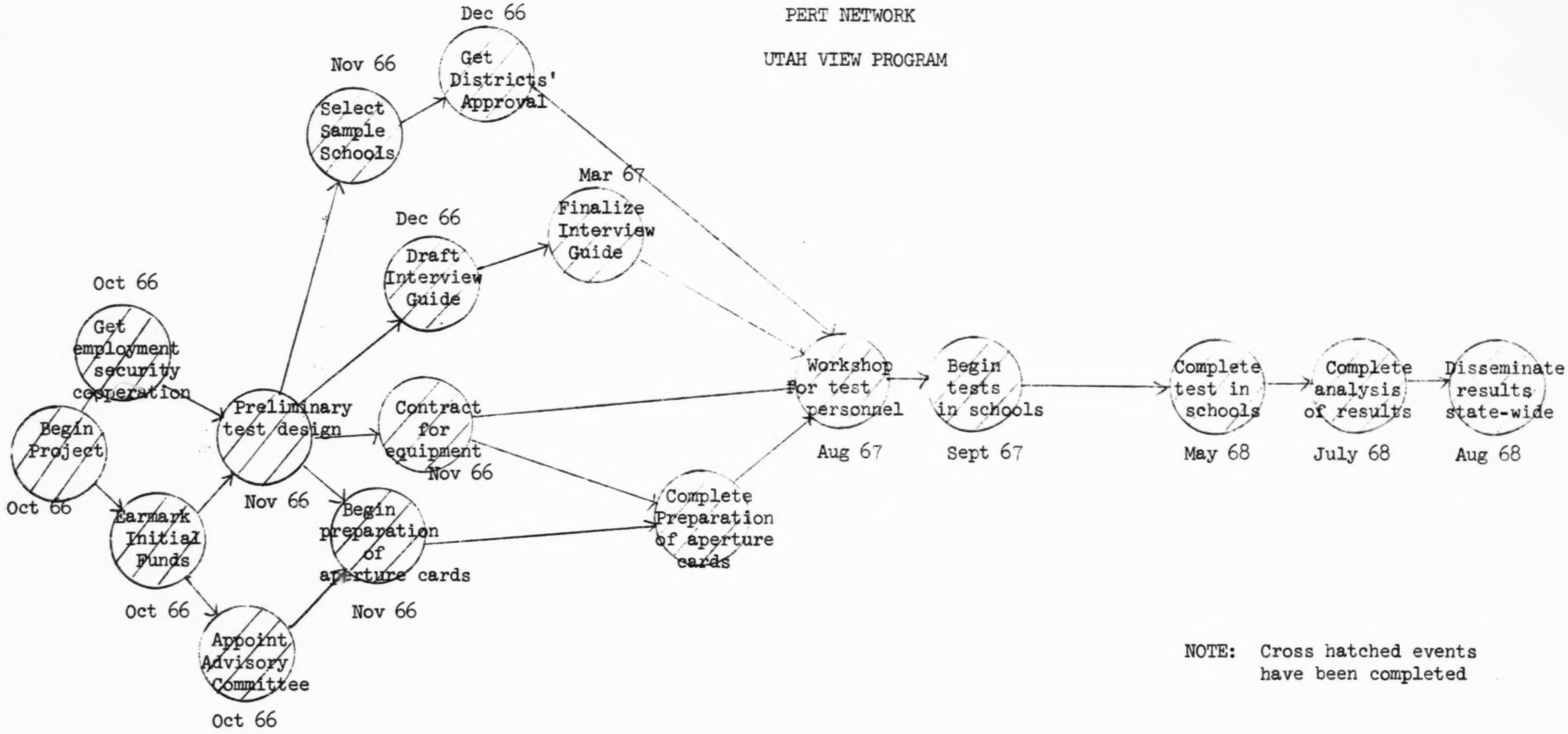
CURRICULUM



Note: Cross hatched events have been completed.

PERT NETWORK

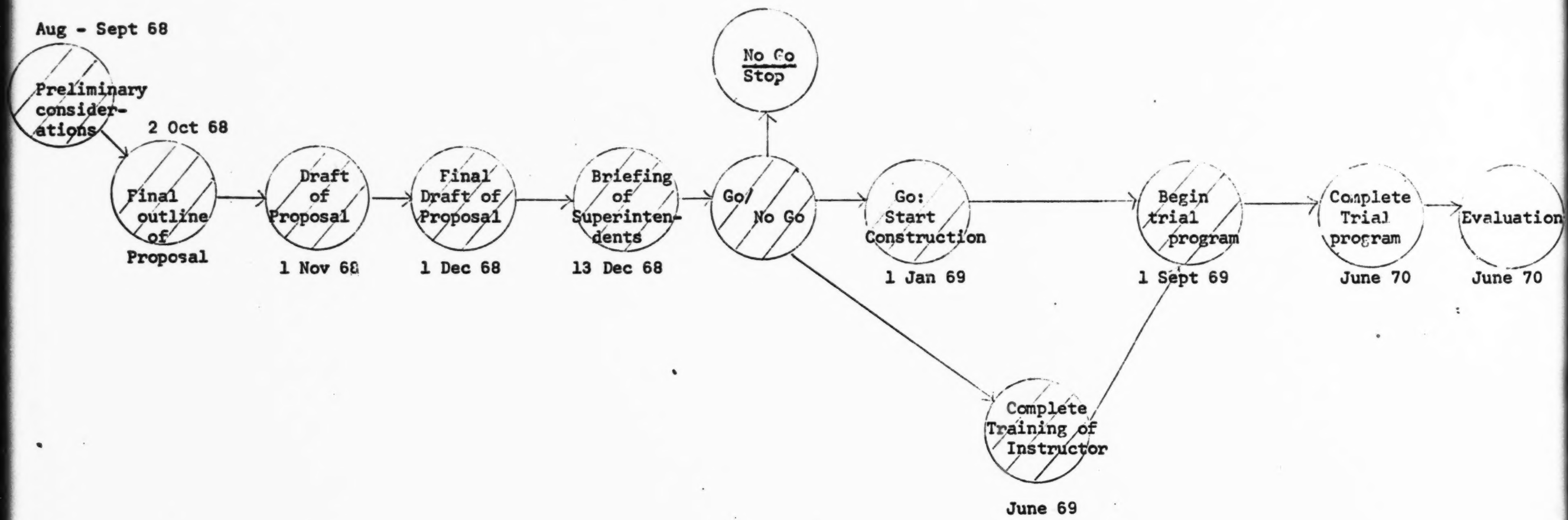
UTAH VIEW PROGRAM



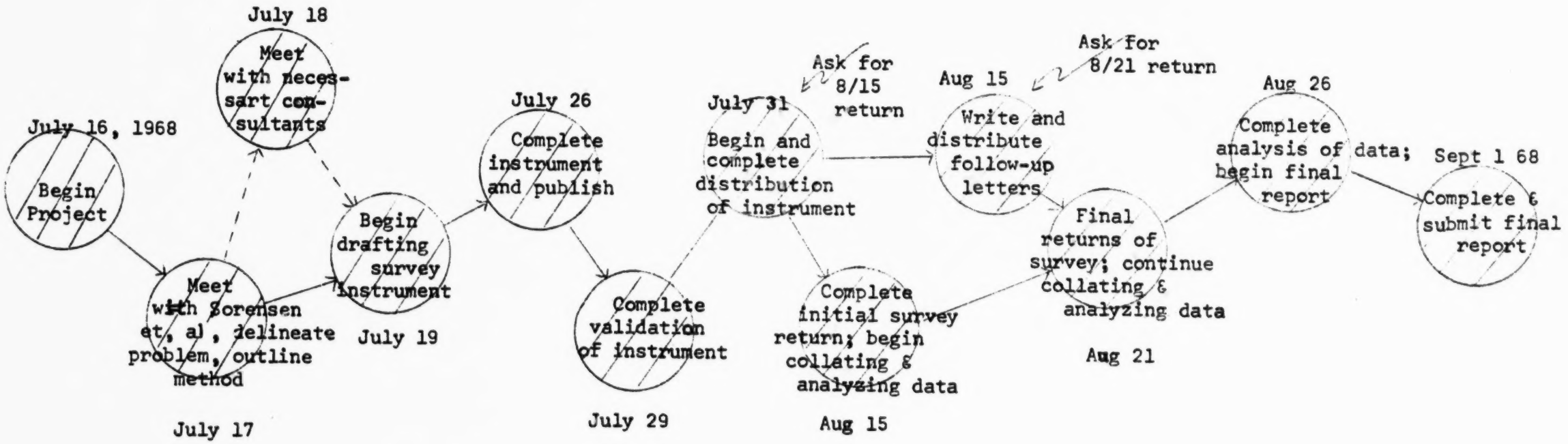
NOTE: Cross hatched events have been completed

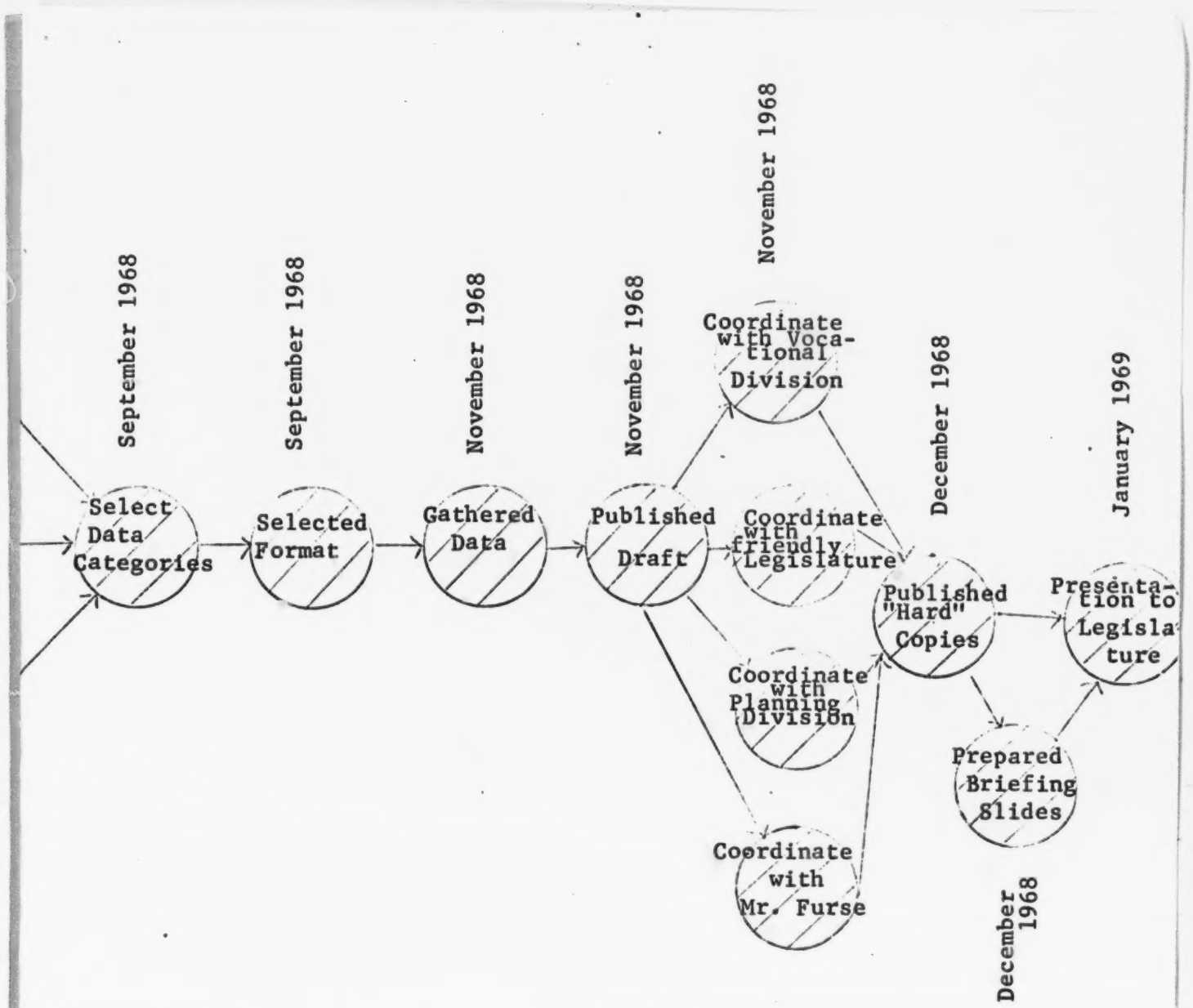
PERT NETWORK:

PROJECT MACE



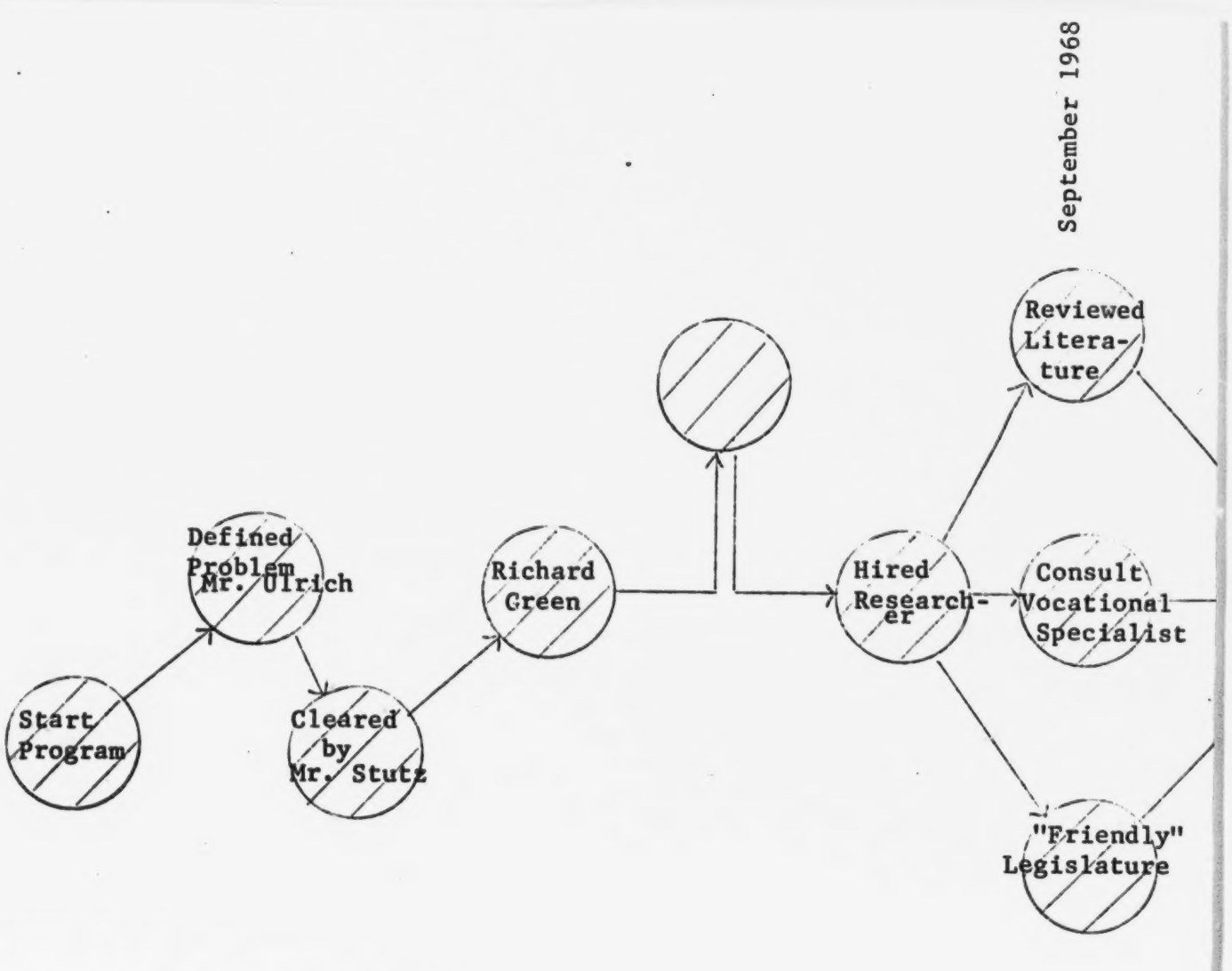
QUALITATIVE REQUIREMENTS FOR HEAVY EQUIPMENT OPERATOR





1 Education in Utah"

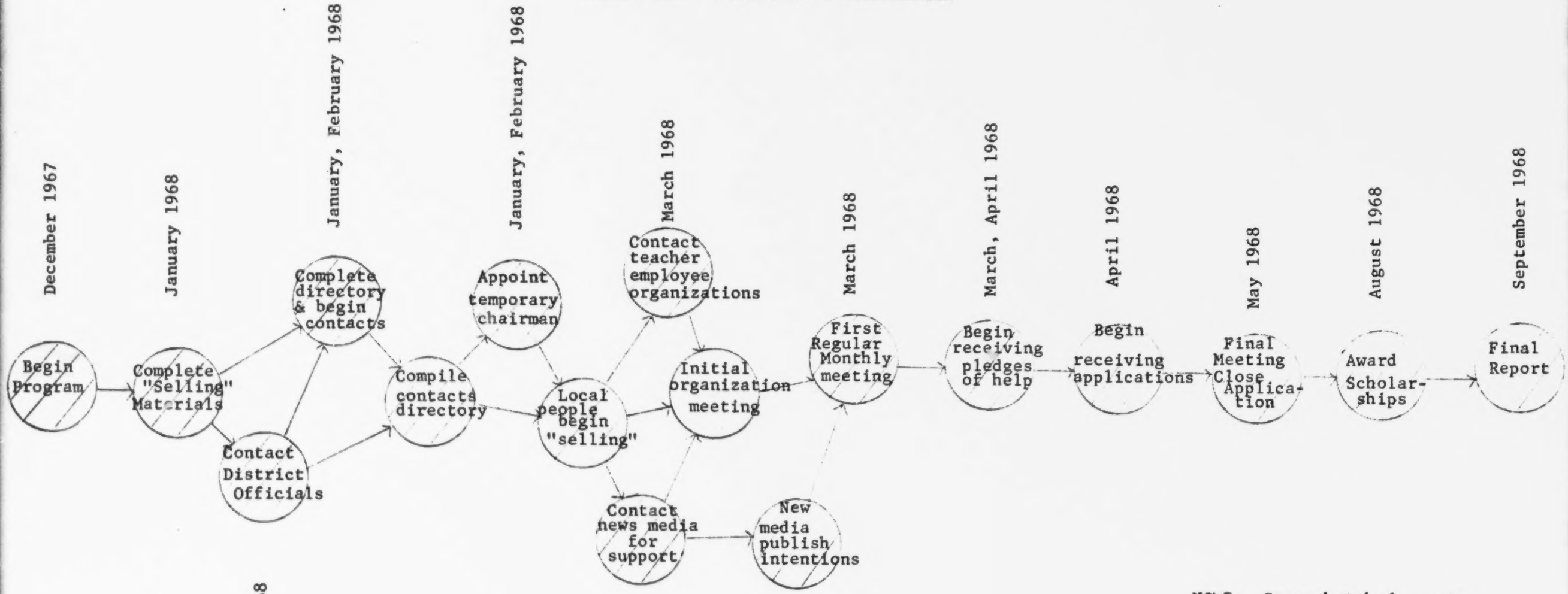
NOTE: Cross hatched events have been completed.



PERT- "Preparation of a booklet and visual aids on Vocational and Technica

PERT NETWORK

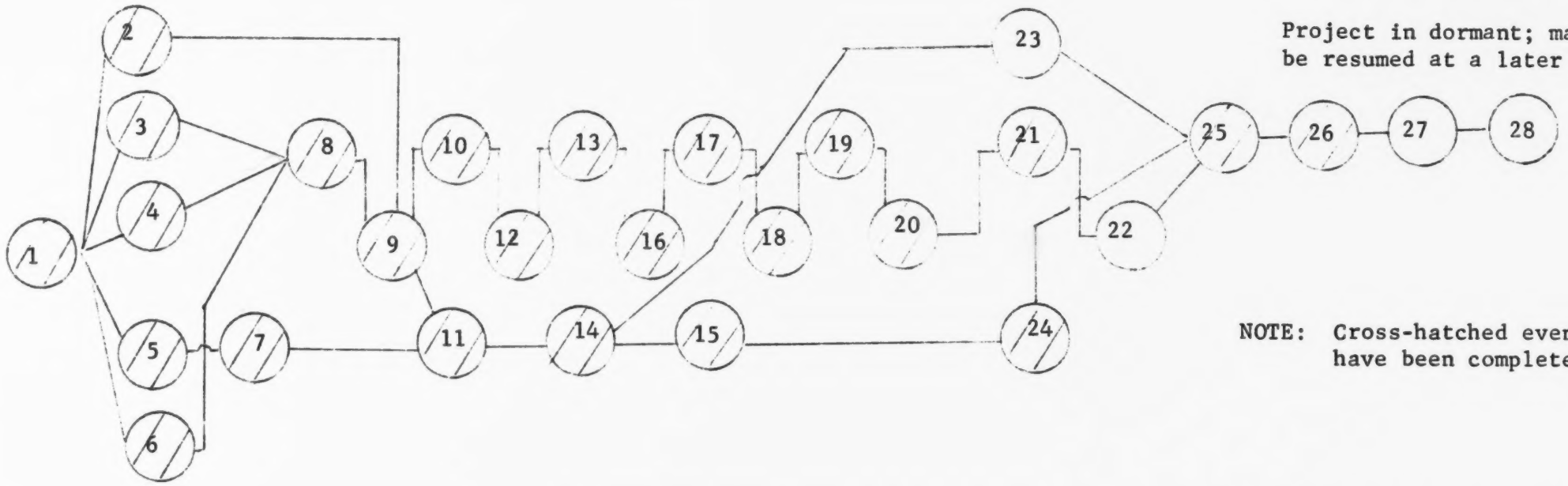
SCHOLARSHIP PROCUREMENT & UTILIZATION



NOTE: Cross-hatched events have been completed

December 1968

Simulation Project of Utah's Education System

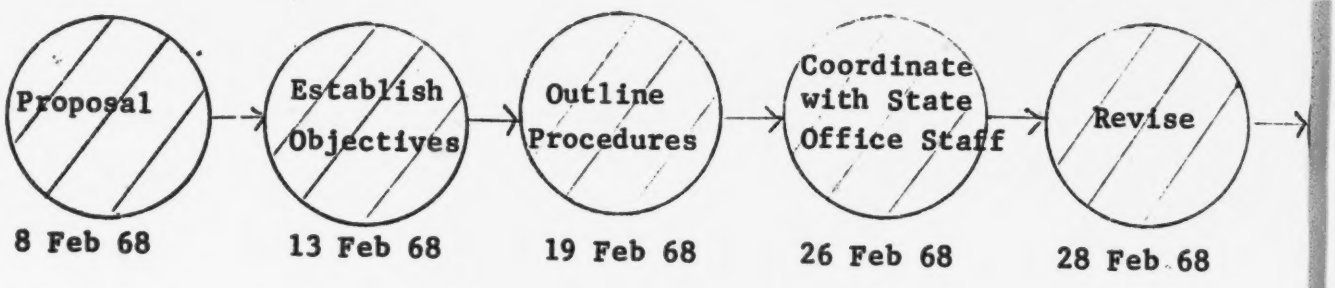


Project in dormant; may be resumed at a later date.

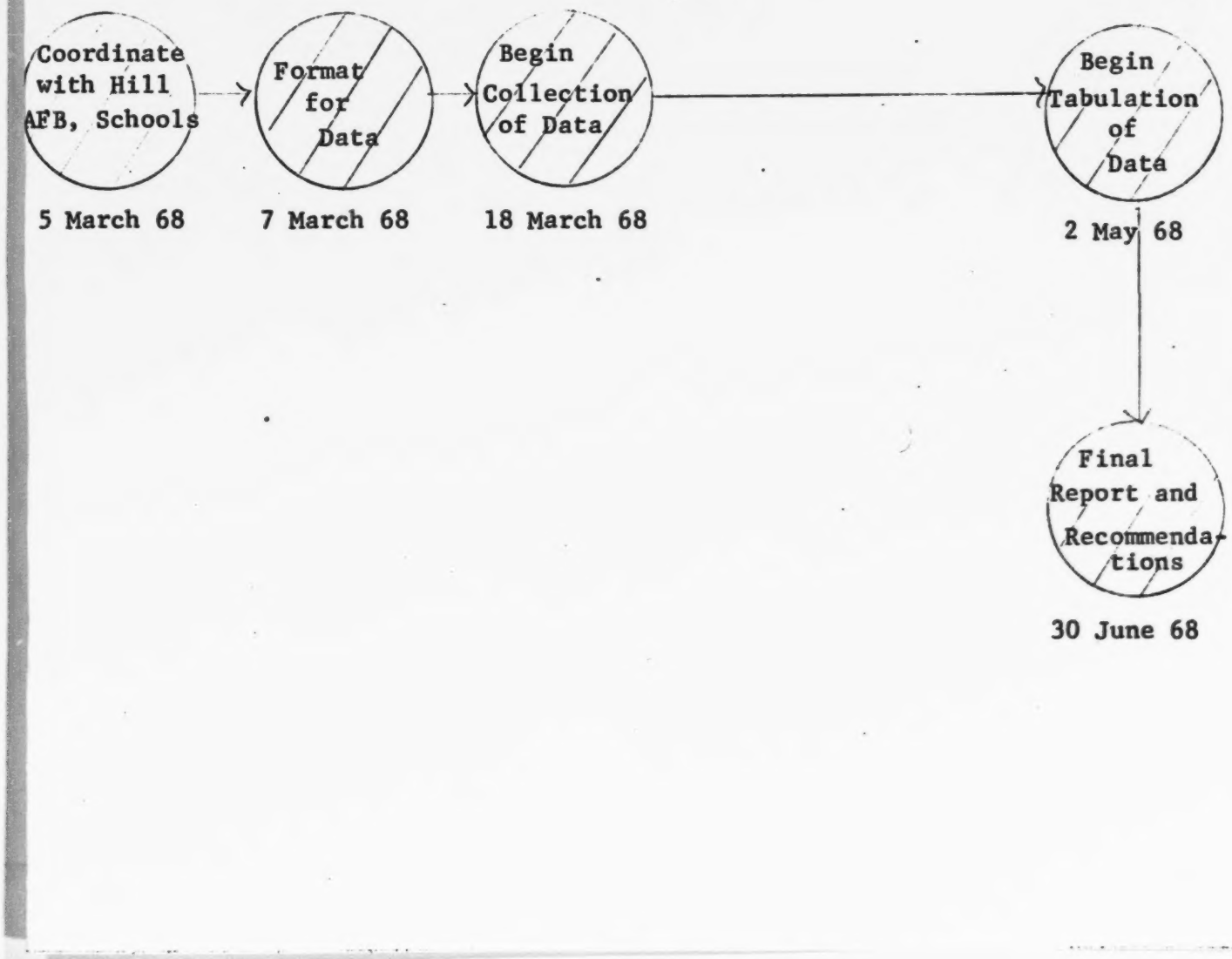
NOTE: Cross-hatched events have been completed

1. November 24
2. Arrange with Computer Center for Run Time
3. Prepare Initial Year Set Up Data for Control, Initial Setup, Output, Beginning of Year Status, Print and Accumulate End of Run Printout
4. Prepare 3 or more Policy "sets" for Initial Runs (1 set "as is '68")
5. Arrange Demonstration Meeting with Superintendency
6. Secure Definite Commitment from Programmers' Superiors for Necessary Time in Nov-Dec
7. Arrange Demonstration Meeting with Instructional Staff
8. Program End of Run Print Out, Initial Set Up, Control Beginning of Year Status Routines
9. Run and Debug End of Run Print Out, Initial Set-up, Control, Beginning of Year Status
10. Program Feasibility and M & O Allocation (Surplus and Deficit) Rountines
11. Prepare for Demonstrations
12. Run and Debug Feasibility & M & O Allocation (Surplus & Deficit) Routines
13. Program DU & M & O, Revenue Routine
14. Make Presentation to Superintendent
15. Make Presentation to Inst'l. Staff
16. Run & Debug DU, M & O, Revenue Rountines
17. Program Needs & Cost Routines
18. Run & Debug Program Needs and Cost Routines
19. Program Enrollment Routine
20. Run & Debug Enrollment Routine
21. Assemble All Routines of Entire Model
22. Run and Attempt Debug Entire Model
23. Arrange with Computer Center for Run Time
24. Make Appointment with Sison for Visit
25. Sison Check Entire Model After Initial Assembly and Trial Run
26. Entire Task Force Critique with Sison Upon his Checking Initial Trial Run
27. Re-assemble Entire Model
28. Run Complete Model (Version I)

HILL AIR FORC

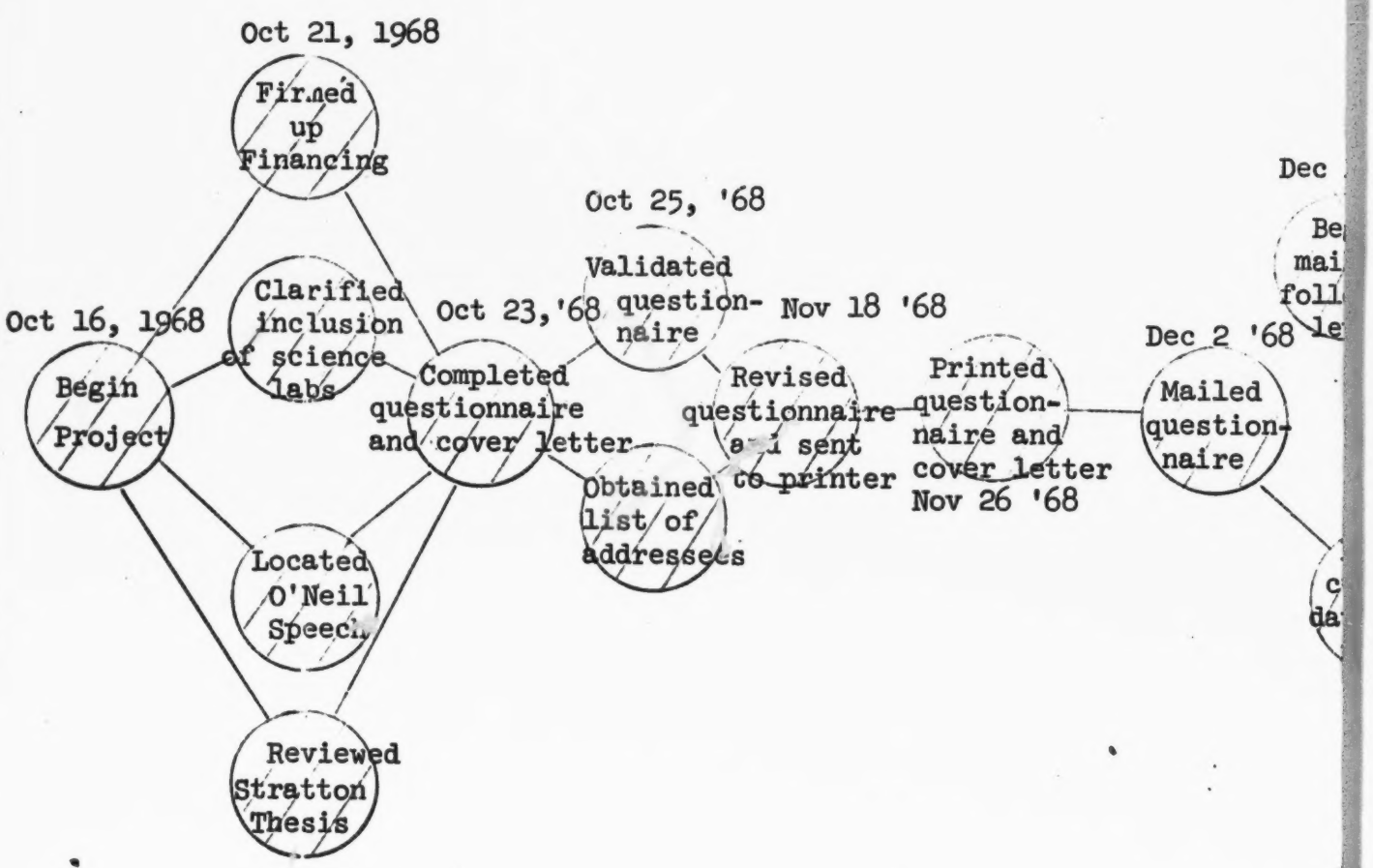


E BASE SURVEY



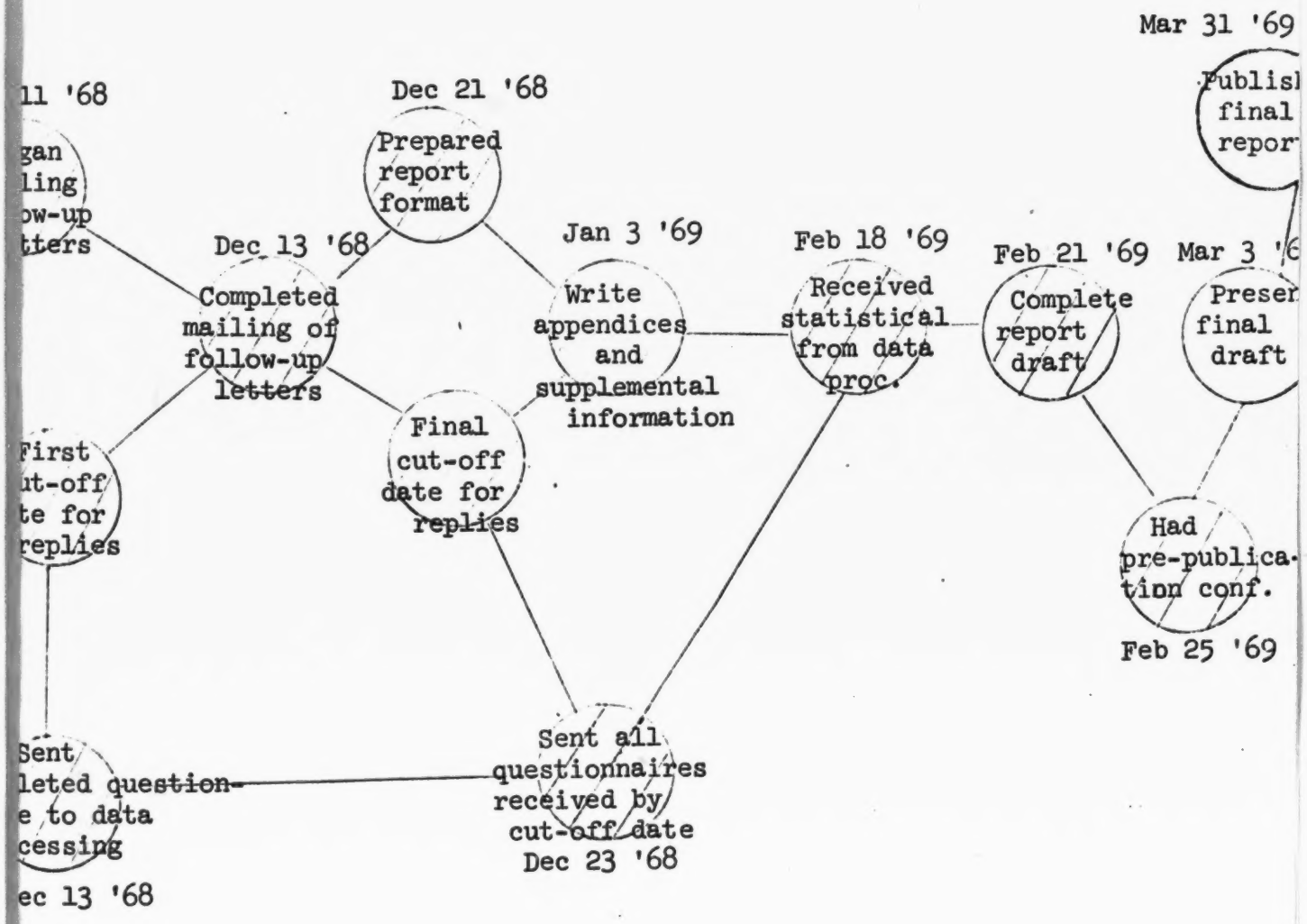
PERT

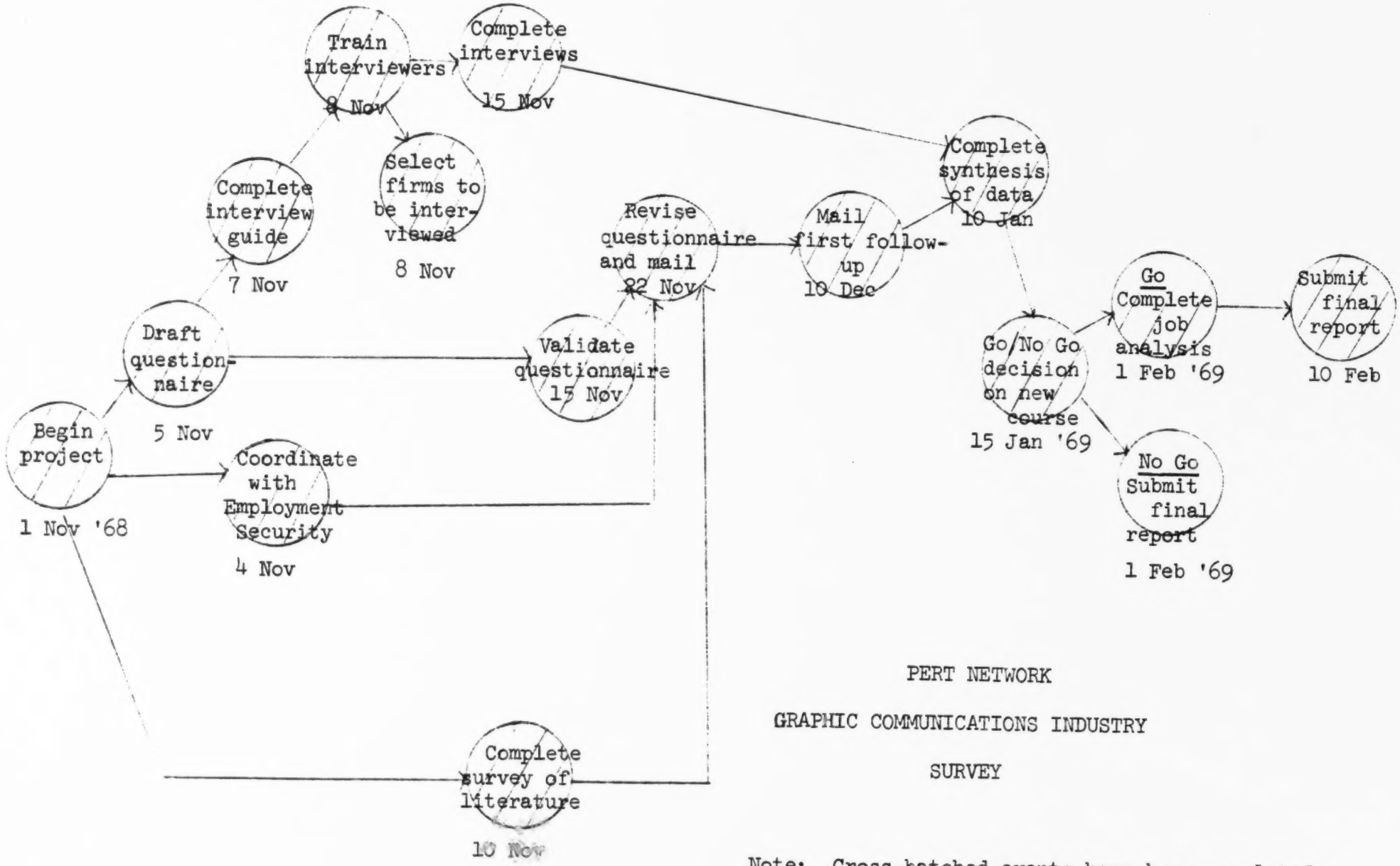
UTAH SCHOOL EY



NETWORK

E SAFETY EVALUATION





PERT NETWORK

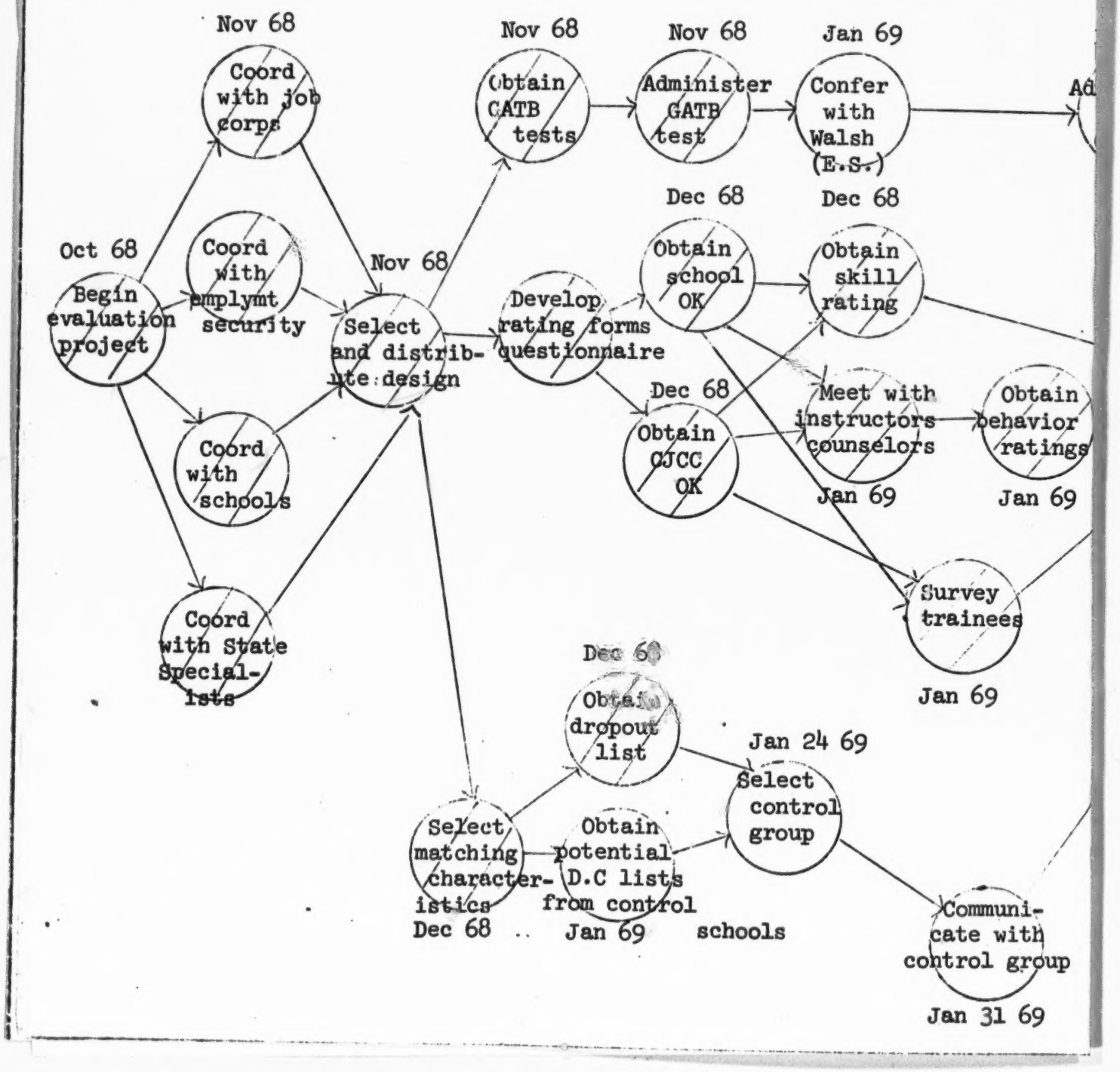
GRAPHIC COMMUNICATIONS INDUSTRY

SURVEY

Note: Cross-hatched events have been completed

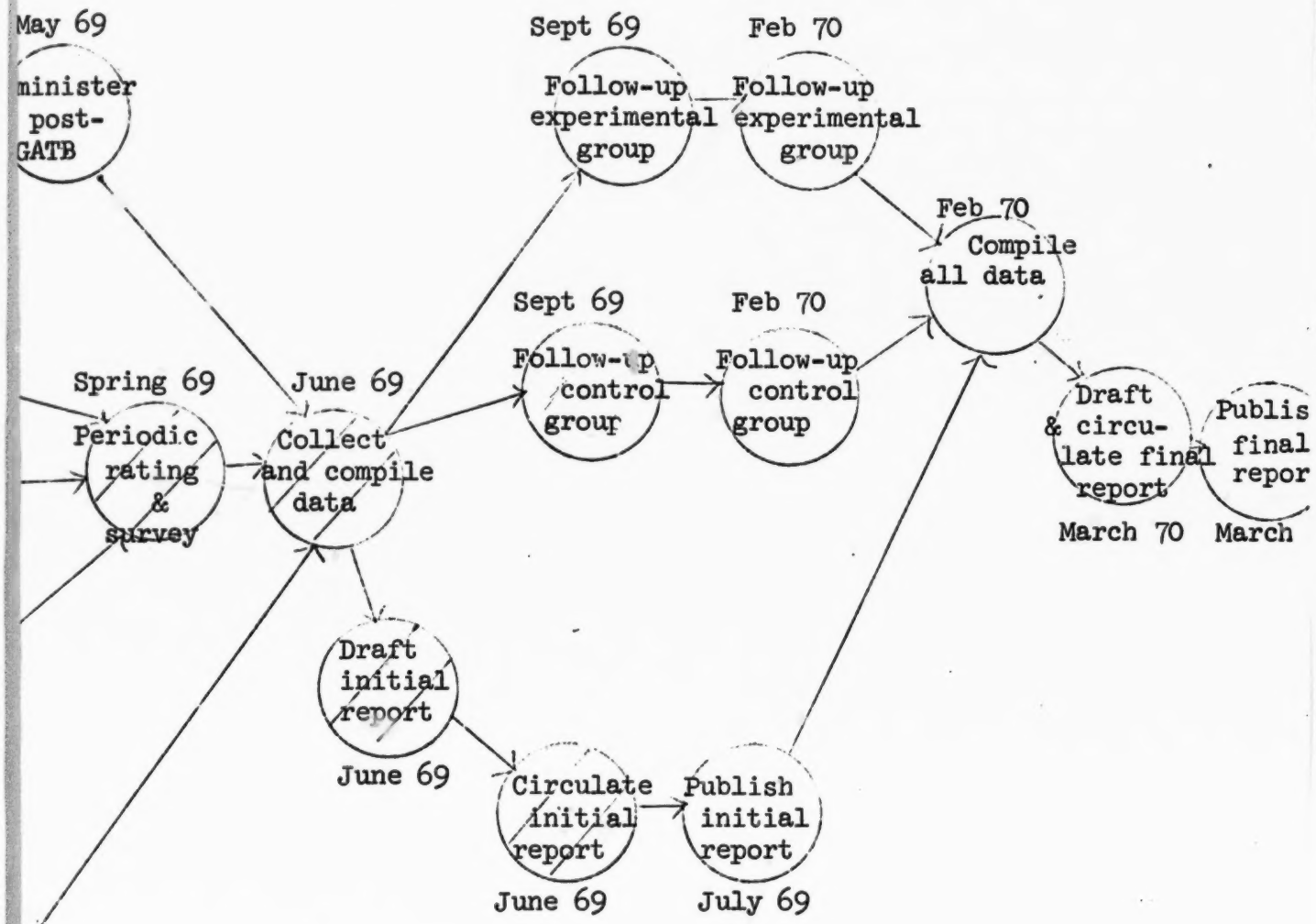
PER

EVALUATION OF CLEARFIELD JOB CO

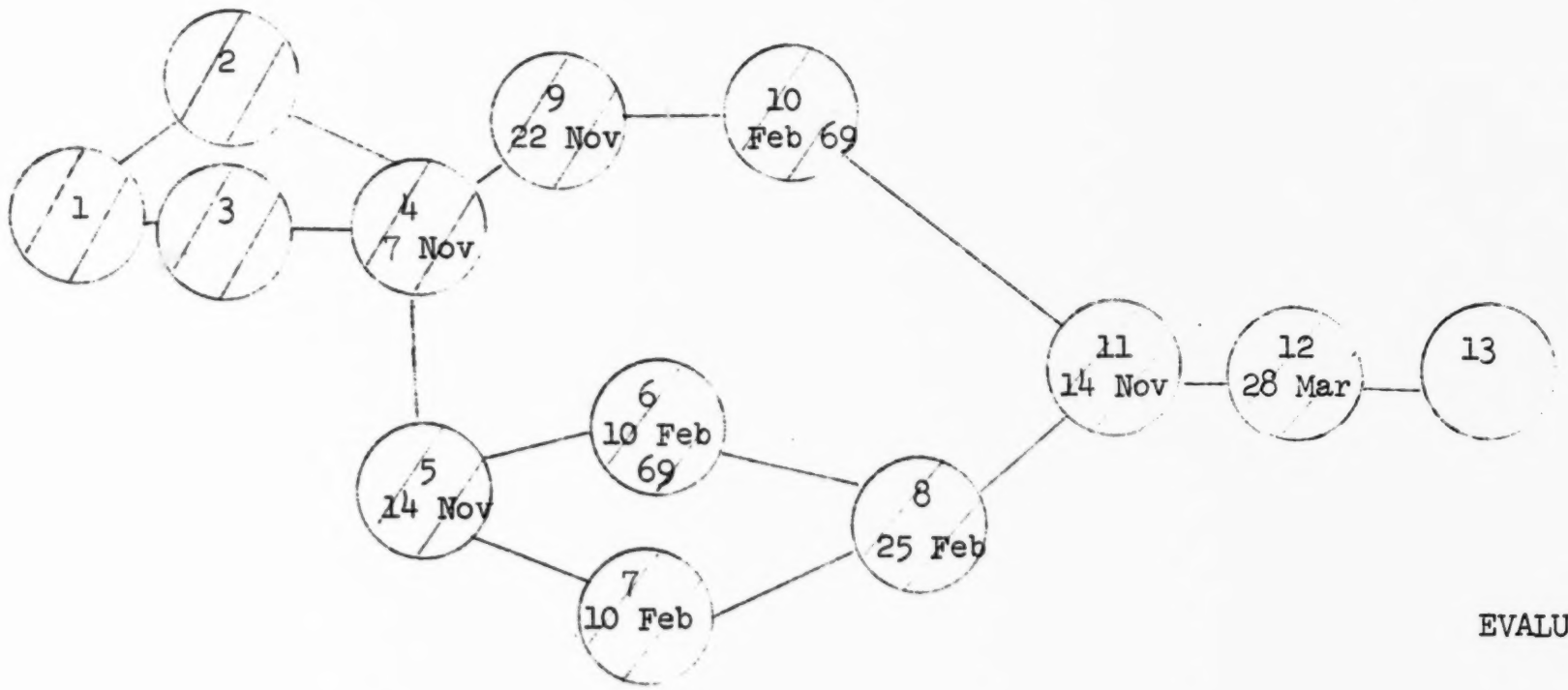


T NETWORK

RPS - UTAH HIGH SCHOOLS COMMUTER PROGRAM



Note: Cross-hatched events have been completed

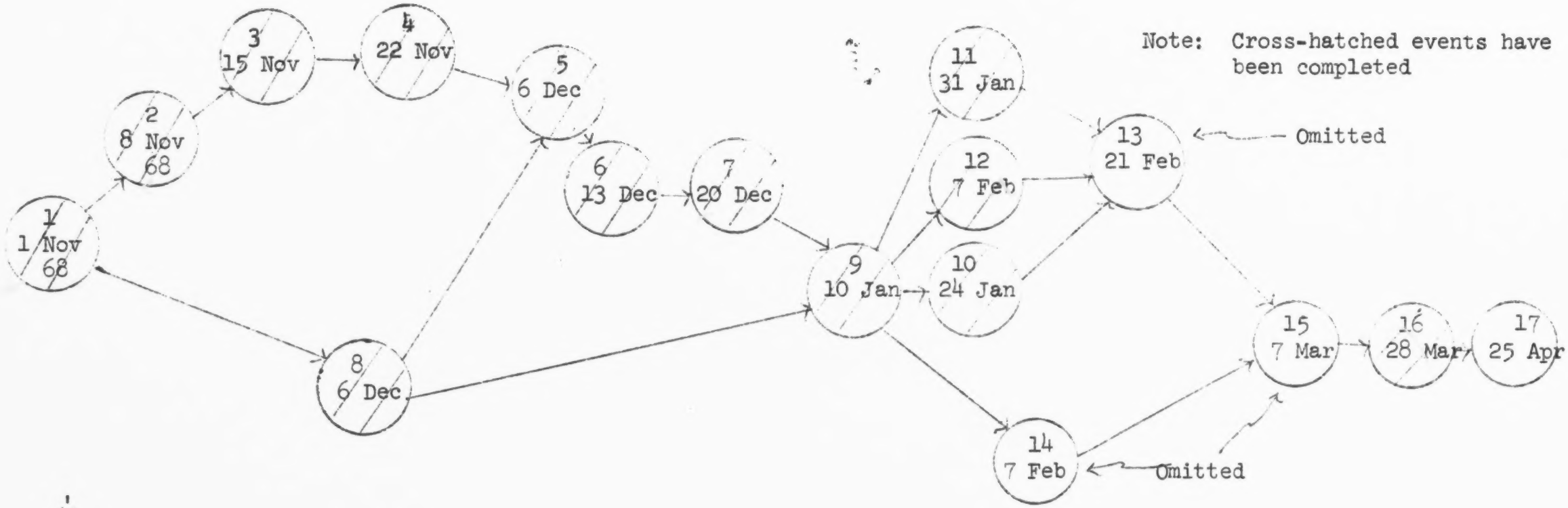


PERT NETWORK

EVALUATION OF SPECIAL NEEDS SUMMER PROGRAM

1. Experimental Group
2. Review Literature
3. Get data on experimental group
4. Select matching characteristics
5. Select control group
6. Questionnaire to experimental group
7. Questionnaire to control group
8. Compile Data
9. Interview & questionnaire--Teachers
10. Categorize treatments
11. Analyze data
12. Draft report
13. Final report

Note: Cross-hatched events have been completed



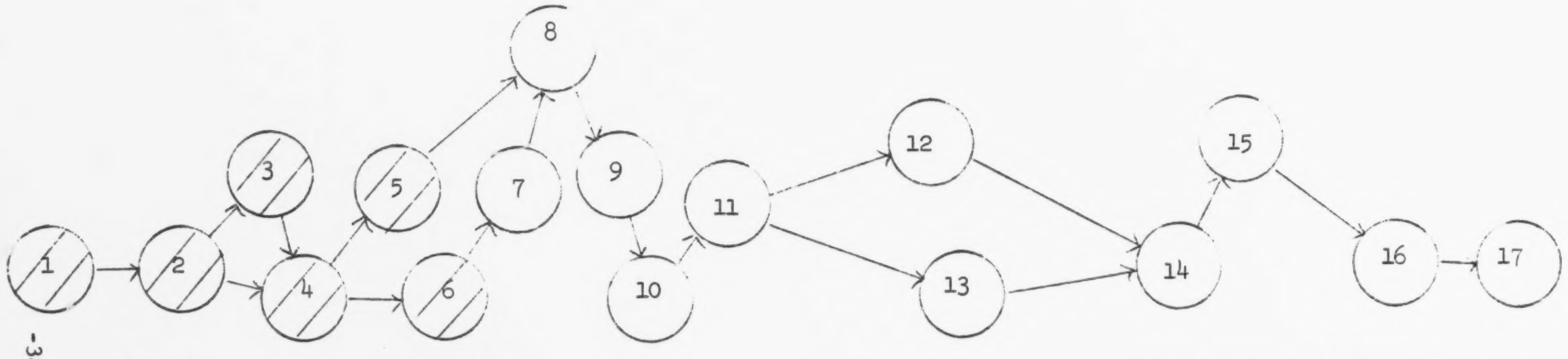
PERT NETWORK

SITE SELECTION STUDY

1. Start project
2. Identify categories of panel members desired
3. Mail letters to desired panel members
4. Mail follow-up letters to non-responders
5. Appoint panel members and notify
6. Distribute questionnaires to panel
7. Reminder notices to non-responders
8. Complete review of literature
9. Determine site selection factors
10. Combind factors into a model
11. Designate "norms" for factors
12. Gather data for validation run
13. Validate norms using a Utah historical example
14. Gather data needed for test run on Moab
15. Complete test run on Moab
16. Complete draft of report
17. Distribute report

PERT NETWORK (PRELIMINARY)

ADULT VOCATIONAL EDUCATION EVALUATION

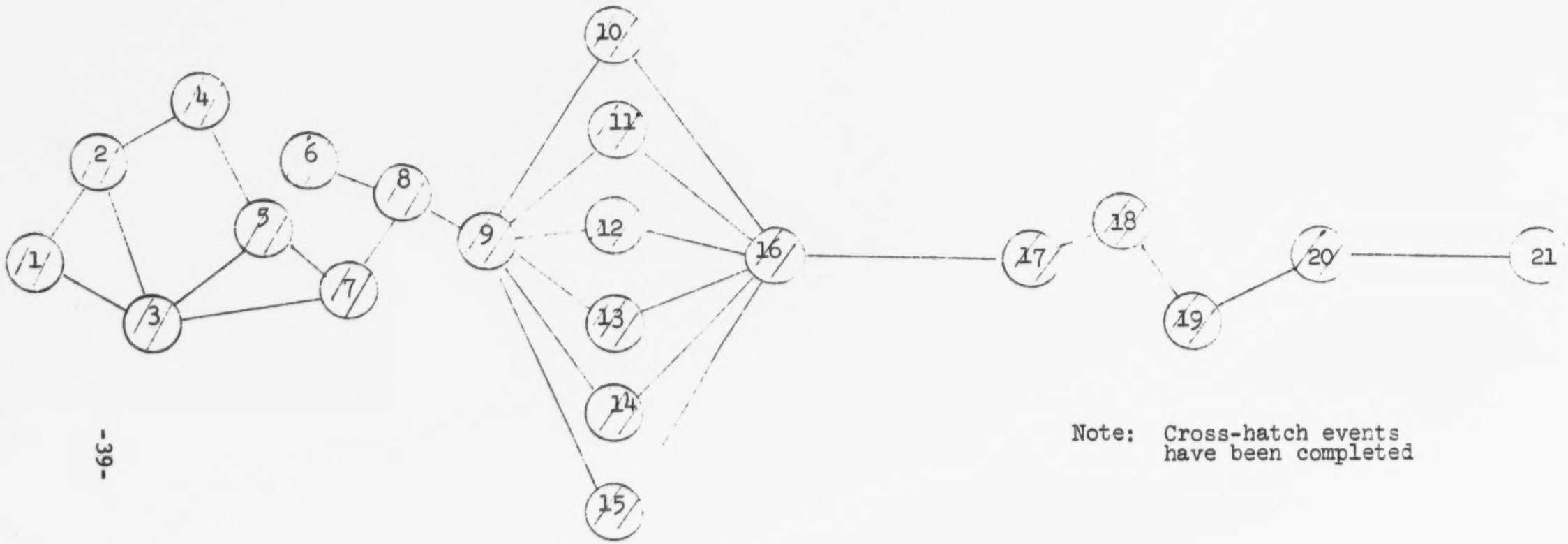


Note: Cross-hatched events have been completed

1. Begin project
2. Get input from specialists
3. Contract investigator
4. Plan survey
5. Select sample
6. Begin developing instrument(s)
7. Complete instrument(s)
8. Begin validation
9. Complete validation
10. Complete revision of instrument(s)
11. Begin survey
12. Begin analysis of data
13. Follow-up questionnaire
14. Complete data returns
15. Complete analysis of data begin final report
16. Complete 1st draft of final report
17. Submit final report

PERT NETWORK

CHEMICAL PROCESS OPERATOR SURVEY



Note: Cross-hatch events have been completed

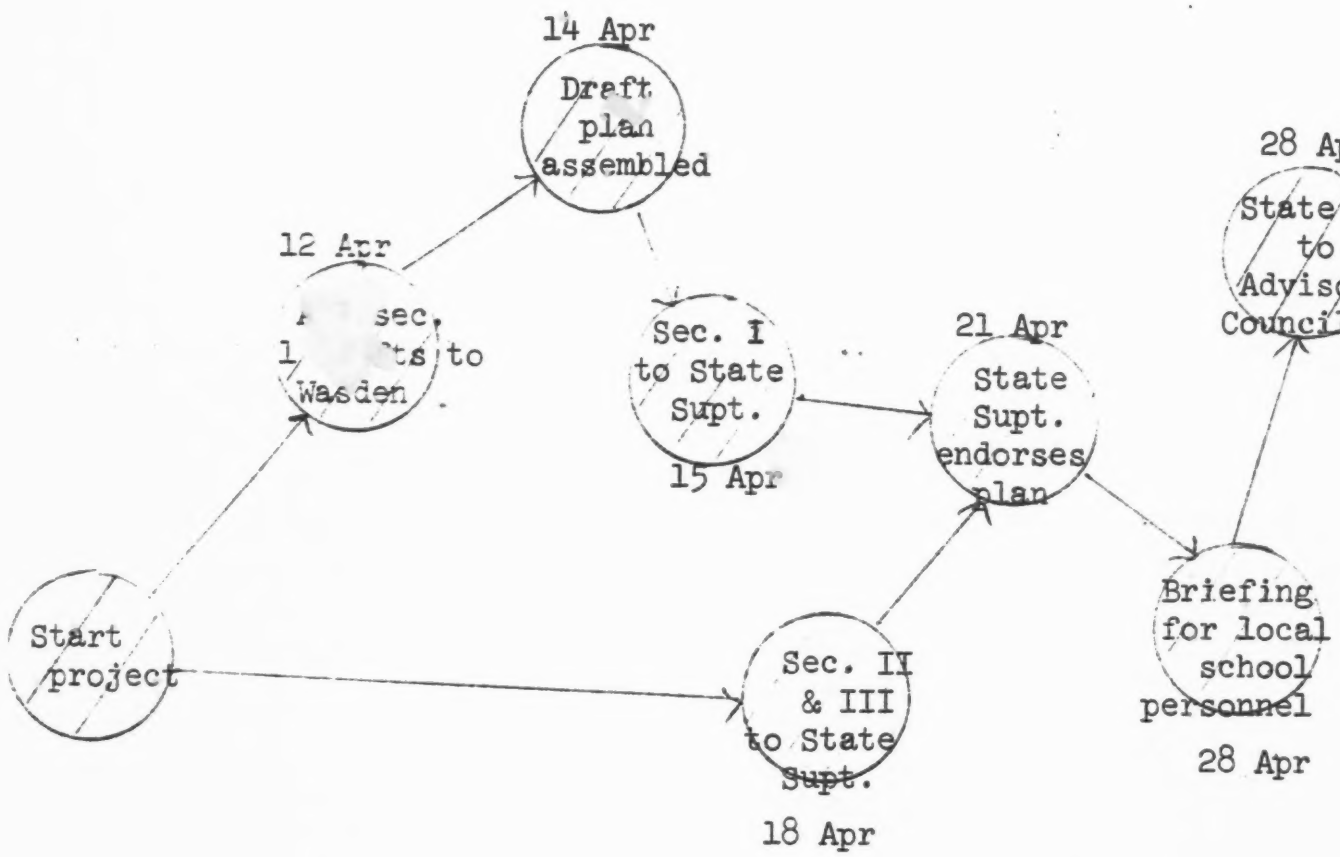
Feb 69 | Mar | Apr | May | June | July | Aug 69

1. Start program
2. Complete coordination with administrators
3. Select principal investigator
4. Locate funds
5. Get Planning Council approval
6. Initial coordination with VT school
7. Complete contractual arrangements with principal investigator
8. Finalize research design, including PERT
9. Define terms and establish operational definitions
10. Queries to local industry
11. Queries to out-of-state schools
12. Queries to presidents of out-of-state companies
13. Queries to labor unions
14. Begin visits to industrial development agencies
15. Establish liaison with Governor's office
16. Receive replies from all queries (an acceptable level is 65% response)
17. Complete analysis of data
18. Submit preliminary draft report
19. Project review with VT school
20. Submit final draft report
21. Complete reproduction and distribution

PERT

Proce

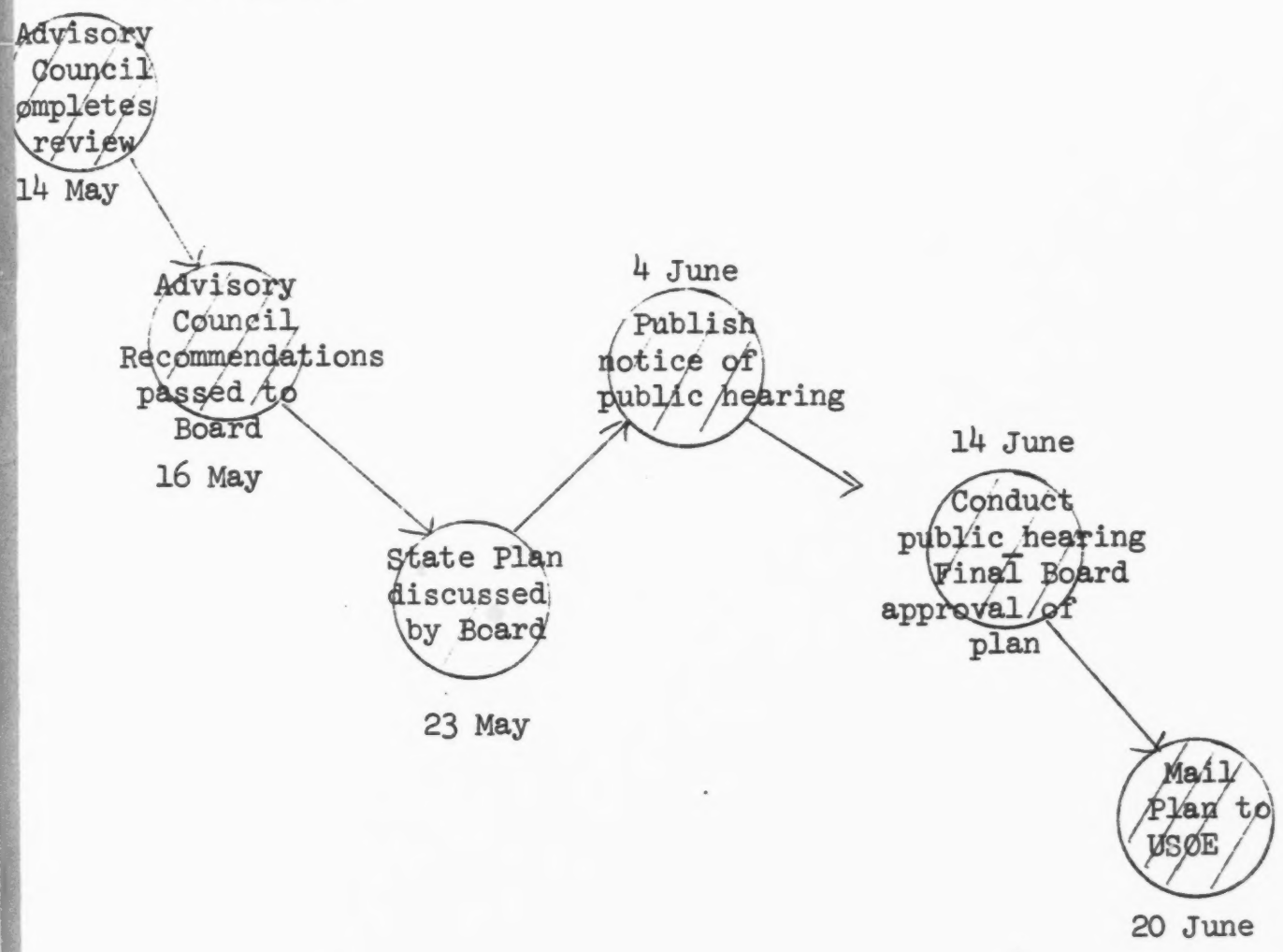
STATE PLAN FOR V



NETWORK

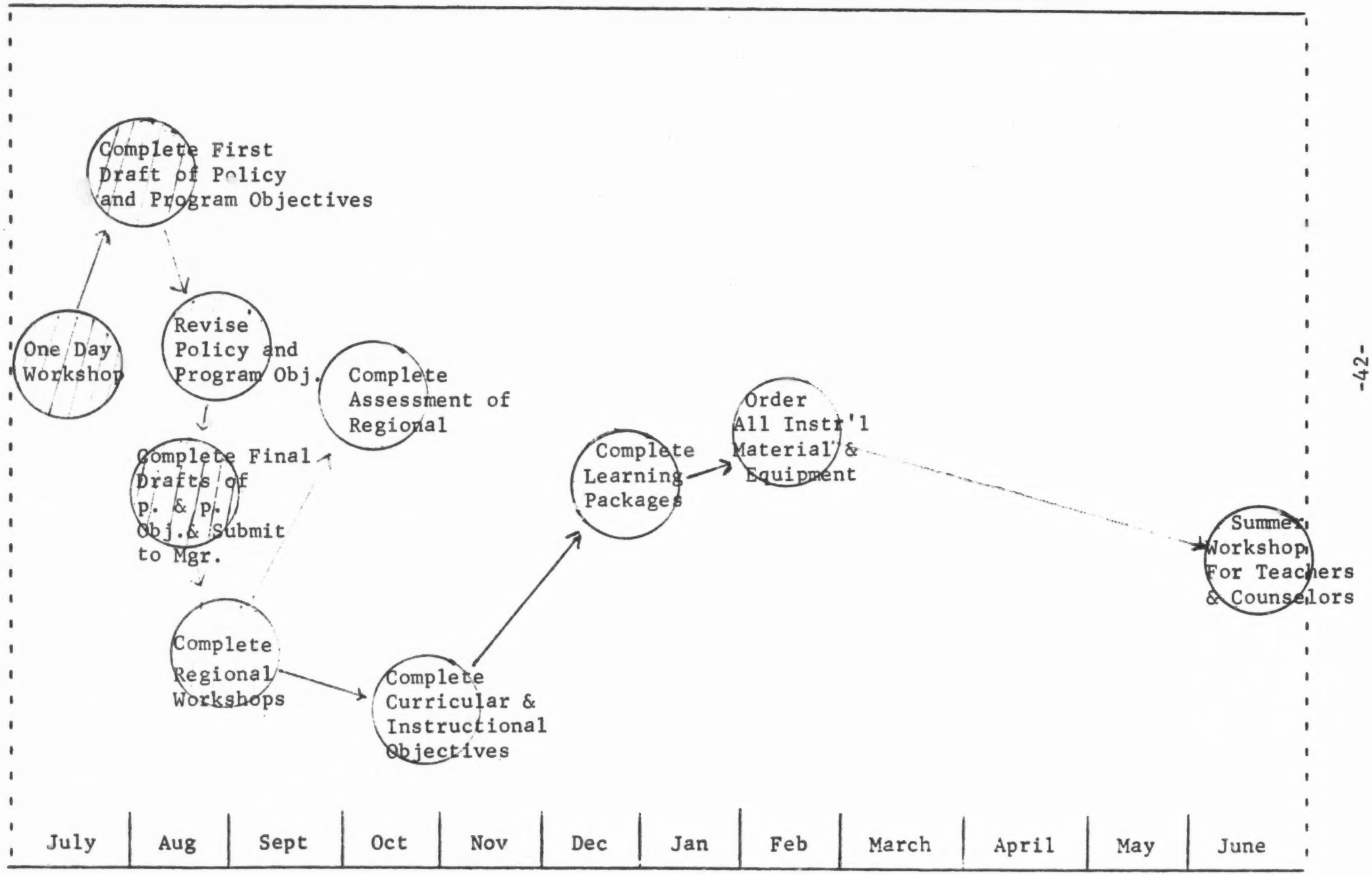
ssing of

OCATIONAL EDUCATION



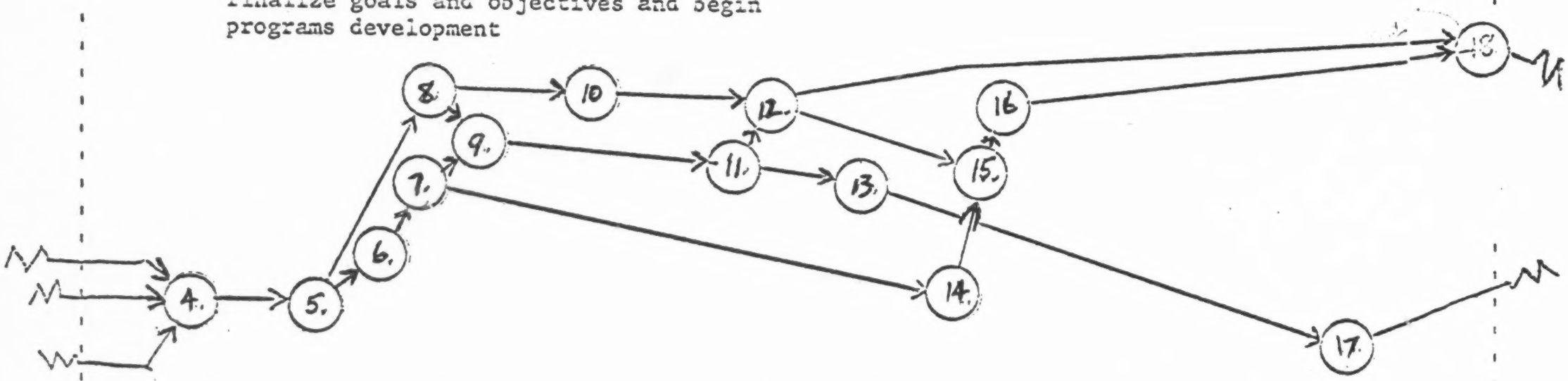
Ogden Area Facilities Utilization Study

July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June


Complete First Draft of Policy and Program Objectives
One Day Workshop
Revise Policy and Program Obj.
Complete Assessment of Regional
Complete Final Drafts of p. & p. Obj. & Submit to Mgr.
Complete Regional Workshops
Complete Curricular & Instructional Objectives
Complete Learning Packages
Order All Instr'l Material & Equipment
Summer Workshop For Teachers & Counselors
July
Aug
Sept
Oct
Nov
Dec
Jan
Feb
March
April
May
June

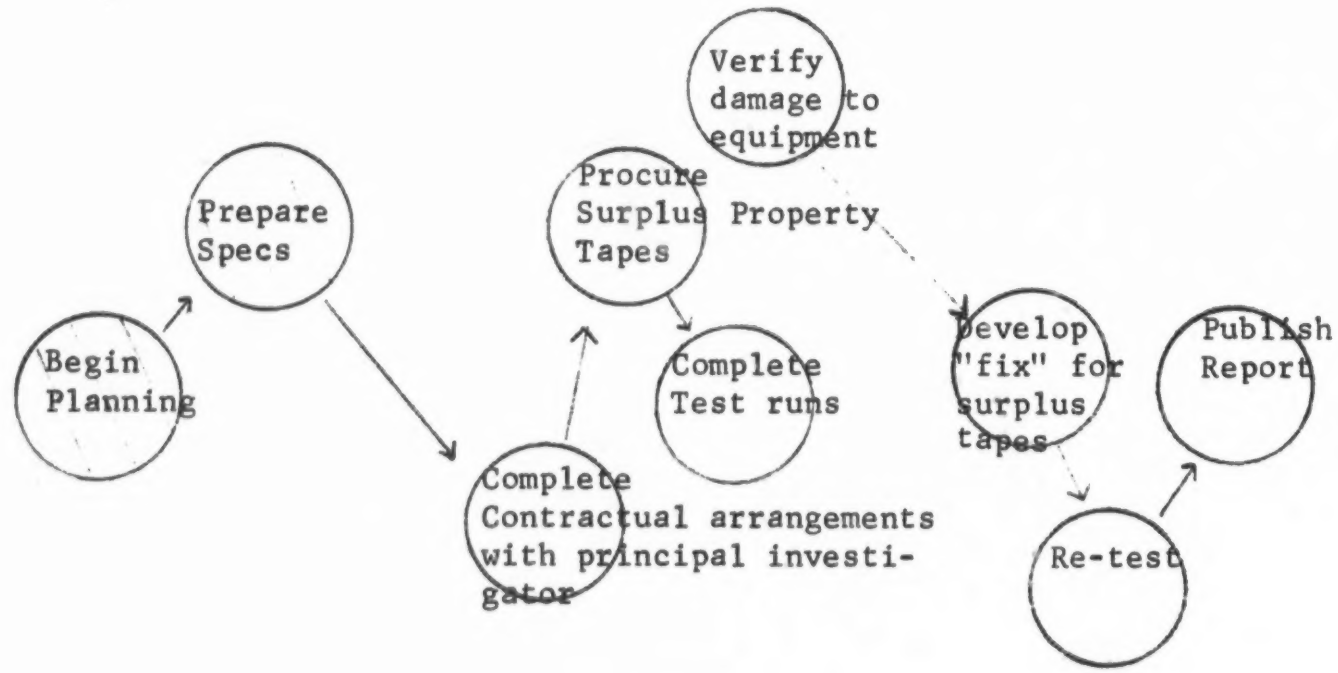
PROGRAM PLANNING AND BUDGETING SYSTEM (PPBS)
TRAINING AND INITIATION FOR SELECTED SCHOOL DISTRICTS

4. Complete and submit proposal
5. Proposal approved; begin work
6. Two day orientation for supts and clerks
7. District task forces begin documentation of existing programs
8. State Office staff begins preparation of policy and category objectives
9. Begin monthly in-service training for district management personnel
10. State Office staff completes policy and category objectives
11. Complete management in-service training
12. Begin management in-service to adapt and finalize goals and objectives and begin programs development
13. Begin (monthly) in-service training for district staffs
14. Task forces complete documentation of existing programs
15. Complete adapting and finalizing goals, objectives, and programs
16. Begin development, by task forces of program budgets
17. Complete district staff in-service training
18. Three day management PPBS work-shop.



Oct. 69 | Nov. | Dec. | Jan. 70 | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. 70

STUDY OF FEASIBILITY OF REPROCESSING SURPLUS COMPUTER TAPE
TO PERMIT USE WITH UTAH SCHOOL VIDEO TAPE EQUIPMENT



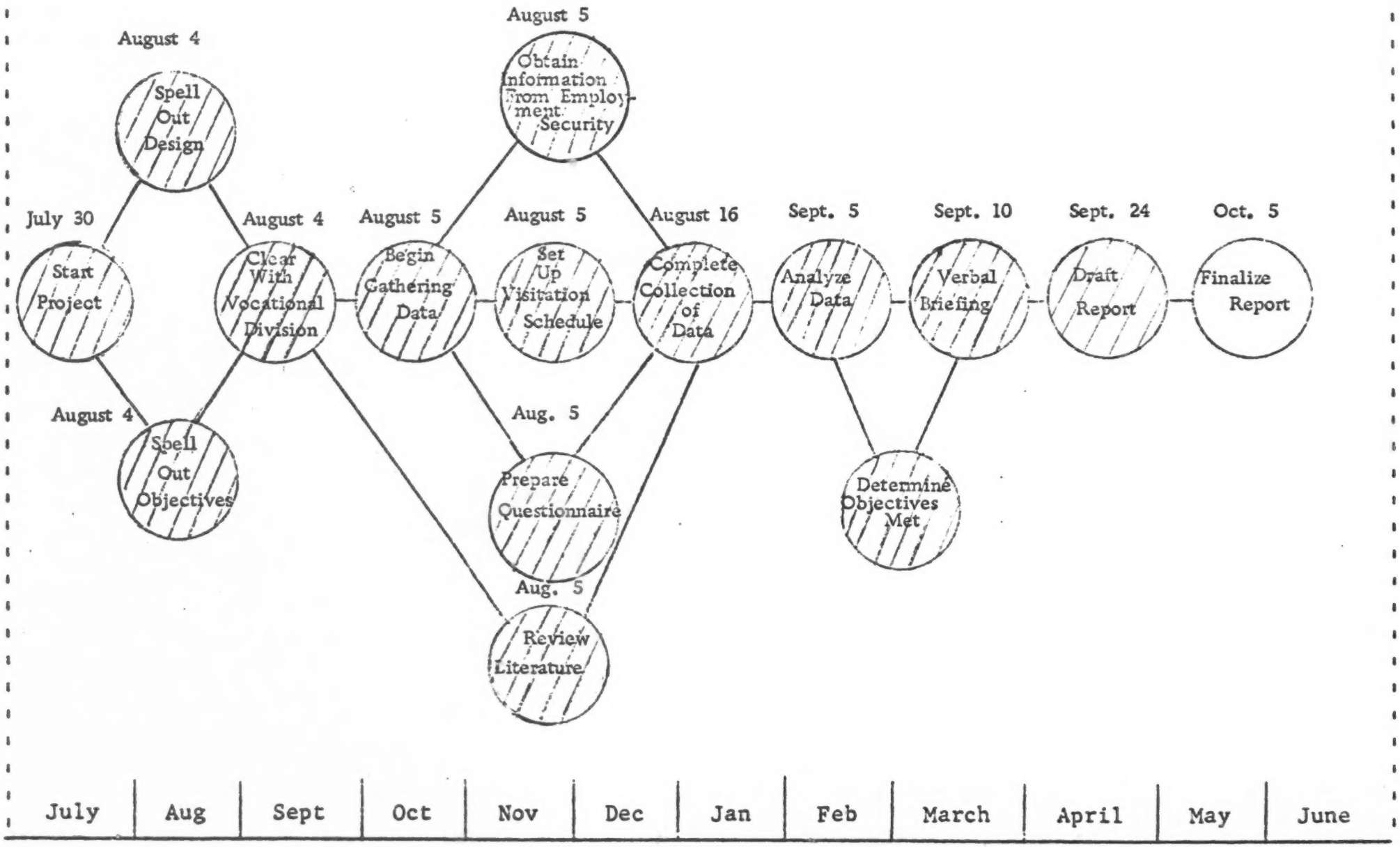
July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June

SURVEY OF REQUIREMENTS FOR
BUILDINGS AND GROUNDS MAINTENANCE
COURSES

Management PERT

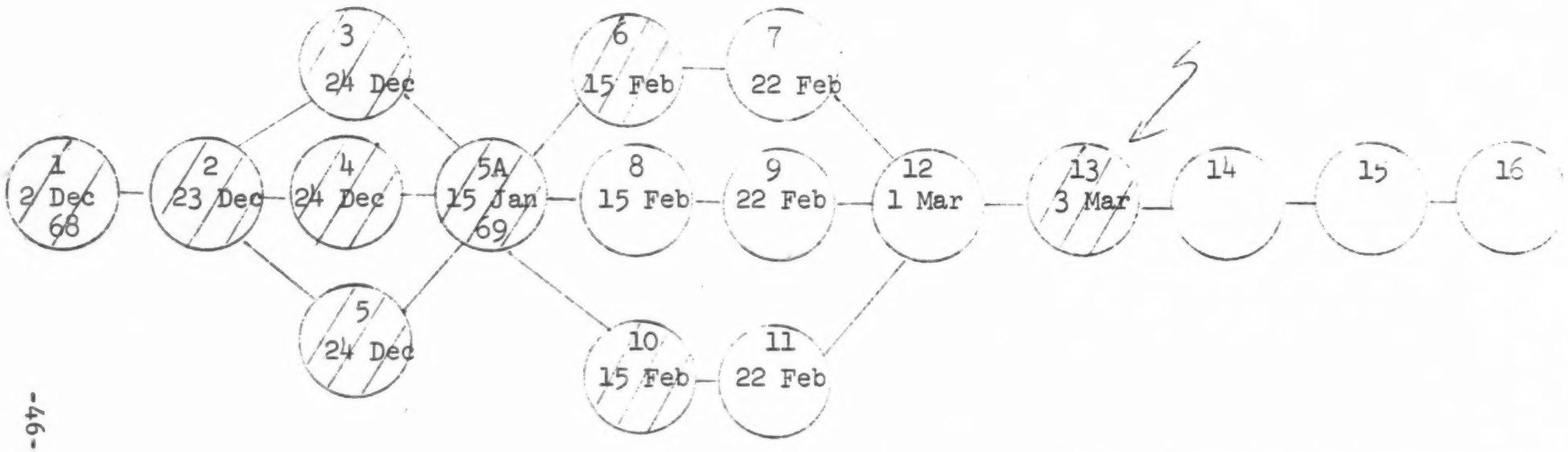
Fiscal Year 1969

Project No. 223
Coordinator 64



PERT NETWORK

FEASIBILITY STUDY OF CURRICULUM DEVELOPMENT LABORATORY



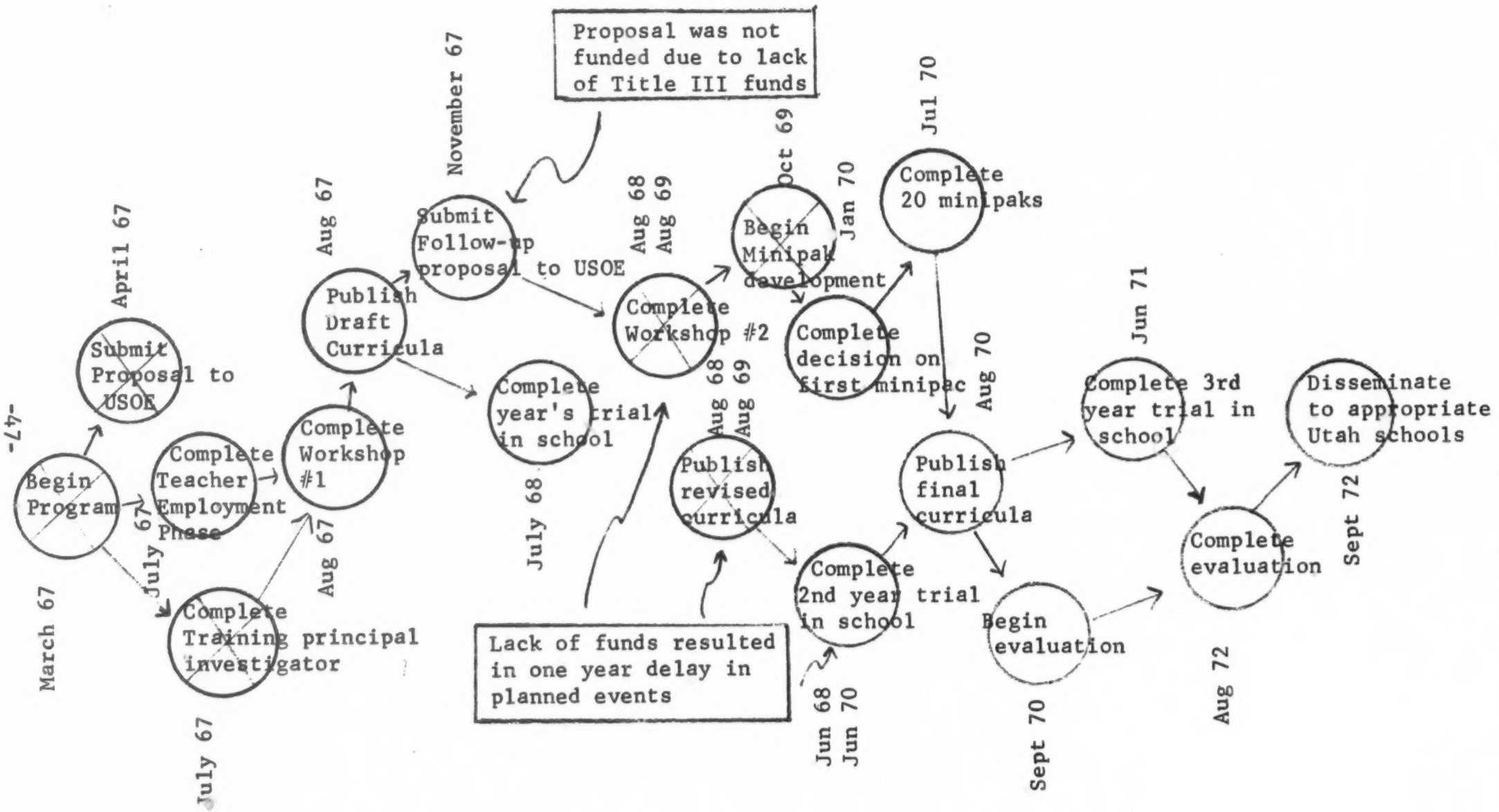
Note: Cross-hatched events have been completed

1. Project assigned R&I Division
2. Compose definition of problem
3. Assign staff survey (Stutz)
4. Assign literature and practive review (Stephens)
5. Assign survey of other than State Staff (Lindsay)

5A. Progress briefing of staff and preliminary definition of terms

6. Complete staff survey
7. Compile shopping list
8. Complete literature and practice review
9. Compile shopping list
10. Complete survey of other than State staff
11. Compile shopping lists
12. Sunthesize shopping lists
13. Brief Administrative staff
14. Revise lists of functions and specifications
15. Develop operational description
16. Start pricing exercise

SEVIER MEASURABLE OBJECTIVES PROGRAM



Personnel	Funds	July '68	Aug	Sept.	Oct.	Nov.	Dec. '68	Jan. '69	Feb.	Mar.	Apr.	May	June	July	Aug '69
Director: John F. Stephens	State	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Assoc. Dir: Austin Loveless	4c	½	½	½	½	½	½	½	½	½	½	½	½	½	½
Research Associates:															
Donna Grushka	4a	1	1	1	1	1	1	1	1	1					
Warren Gaddis											1	1	1	1	1
Research Assistants:															
Niel Edmunds	4a	½	½	½	½										
John Kearns	Title III		½	½	½	½	½								
C. Edward Clark	"				½	½	½	½	½	½	½	½			
Barbara Valentino	"				½	½									
John Klieforth	4a				½	½	½	½	½	½	½	½			
Gene Russell	4a				½	½	½	½	½	½	½	½	½		
Mac Hamblin	4c								½	½	½	½			
Bruce Humberstone	4c								½	½	½	½			
Grover Thompson	4c					½	½	½	½	½	½	½	½	½	½
Charlene Hoskins	Title III												½	½	½
Ann Bailey	Title III													½	½
Ming H. Land	4c												½		

Funding

The fiscal report on the operation of the RCU (1 July 68 - 31 August 69) is being prepared and will be forwarded under separate cover as soon as it is ready.

ADDENDUM

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Final Report, Grant No. OEG-4-7-063046-612 (1 December 66 to June 68), mailed to U.S. Office of Education November 13, 1969 separate from this report.